PHOTO-ERA

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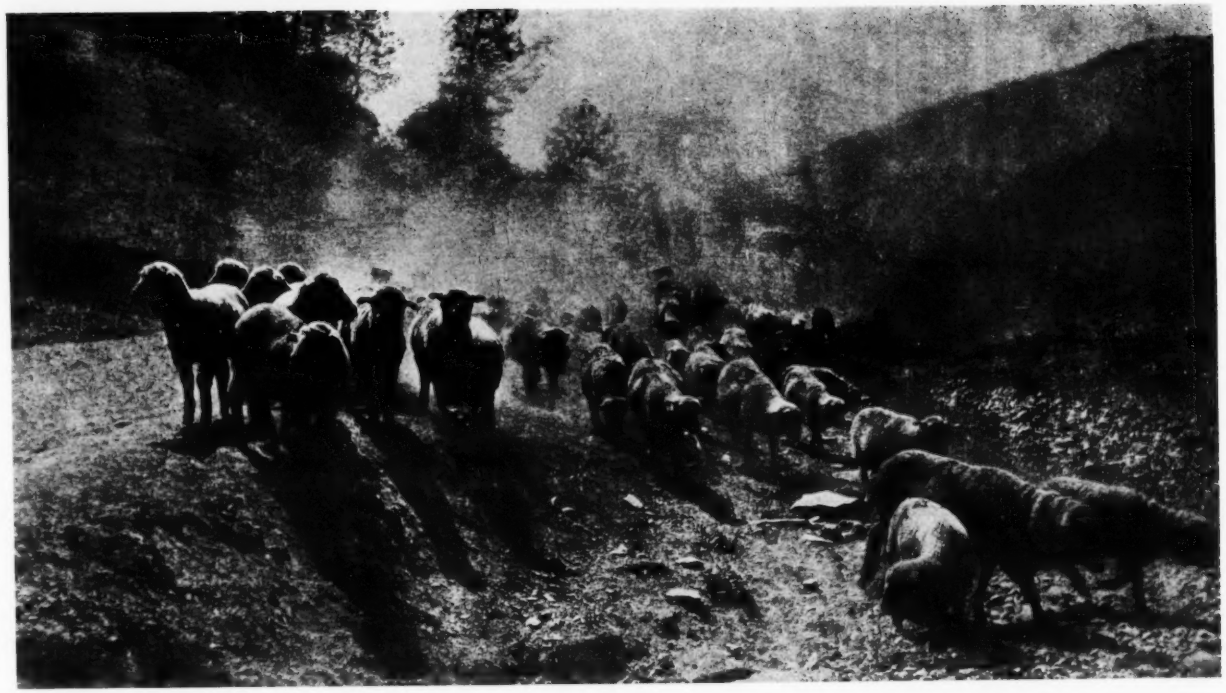

WILLIAM S. RICE

ON A SHEEP RANCH

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The Gum Process and Its Proper Application

SIDNEY ALLAN

THE contention whether photography is an art or not, or what is legitimate or illegitimate in its technique, has been a pet theme for discussion for the past forty years. The difficulty of settling this problem lies largely in the peculiarities of the photographic process. Half mechanical, half a matter of good taste, without the addition of manual dexterity, it is so vastly different from anything else we call art that it is well-nigh impossible to classify it. It is futile to compare it with painting; and as far as the graphic arts are concerned, well, there is first the same differentiation we have just pointed out, and secondly, that the texture of the photographic print is devoid of granulations. In the graphic arts there is no method which makes use of granulation so minute as to be indistinguishable, as is the case with photographs which, like printed matter, represent a uniformly smooth surface. Multitudes of particles and granules, as, for instance, in wood-engraving or lithography (not to speak of lines that stand in relief as in engraving and etching), have a greater charm to the eye than a flat surface, at least in monochrome.

That photography is deficient in texture even its most enthusiastic exponents do not deny. It has been a great drawback of the straight photographer. He is hedged in by mechanical influences that sap enthusiasm and deaden the ambition; he is harassed till, like a fox chased by the hounds, he would feign give up the merit of his own production and escape to a burrow of peaceful oblivion. And this helplessness has been the reason that all sorts of manual manipulation were appealed to, in order to break the monotony. The result, although beautiful at times, was a hybrid pictorialism which is neither photography nor art. And, to tell the truth, paper with a rough surface has been more to the point than all manual embellishments.

Not until the gum process (discovered toward the middle of the last century, and soon after discarded as unpractical) was revived was there a real excuse for hand-manipulation. With its introduction the use of the brush became perfectly legitimate, as the brush is now a tool of the process. After a gum-print has been taken from the printing-frame — merely the outlines of the image being recorded — by the application of water with the help of a brush as much or little of the

layer of gum as may be desired can be washed off. This adds a certain resemblance of granular texture to the photographic print, approaching, in a way, the methods of the black-and-white arts. The gum process represents a mechanical process *plus* manual dexterity. The extreme pictorialists, overjoyed at finding such a loophole, played havoc with the process and lost themselves completely in wild imitations of painter-like effects. To them a gum-print is not successful unless it resembles the mangy fresco-surface of Leonardo da Vinci's "Last Supper," of which the pigment is steadily peeling off.

But there are other photographers who use the gum process more wisely, who look at it merely as a facility to augment photographic conditions. They are the real gum workers. In their opinion the gum process can be legitimately used only to gain more freedom and looseness of effect, without destroying the constructional qualities of the photographic image. The gum worker, so long as he claims to be a photographer, has no right to get out of touch with the facts of the negative. And this seems the chief shortcoming of the process. The process is so rapid that even the experienced worker with a thorough knowledge of forms is apt to lose sight of the realities of the ground-plan, and the result is invariably a falsification of values. At present it can be safely used only to sweep obtrusive details into broad masses, to produce a strong picture without harshness, to make the value-variations more subtle, and, above all, to add the gritty surface effect, peculiar to gum, to his prints. Moderation must be the first rule in its application. There is no reason why the photographic craftsman should think it advantageous to rival with the monotypist. The photographic texture must be preserved; only then will it become a valuable possession.

A Catechism on Focal Lengths

G. M. ALVES

Question.— If lens optics is an exact science, why is it that workers in photography usually know so little about the subject, and why is it that in print we so often see contradictions?

Answer.— Lens optics is an exact science, but is usually treated in a rigorous, mathematical way, which the general run of those who practise photography cannot understand; also, those who write about the subject frequently have really no scientific knowledge of it, and, hence, are apt to get into errors and contradictions along with their truths and half-truths.

Ques.— Can one acquainted with lens optics explain in simple language to one not skilled in mathematics the practical results of the science?

Ans.— Yes; all that he really needs to know.

Ques.— What effect has the focus of the lens upon the photograph?

Ans.— The focus of the lens has two effects: (1) it determines the size of

the objects in the photograph; (2) it determines the depth of focus in the photograph.

Ques.— In what way does the focal length of a lens determine the size of an object in the photograph?

Ans.— The matter may be simply explained as follows: if, at any distance from your eye, you hold a pane of clear glass between your eye and any scene, and if, upon the glass so held, you imagine the scene to be etched, then the scale or size of the objects of the etching will be that of a photograph taken with a lens of focal length equal to the distance from your eye to the pane of glass. If the glass was held eight inches from the eye, then the etching would give objects of the same size as would a photograph taken with an eight-inch lens. If the pane of glass was held at sixteen inches, then the etching would give the objects of the same size as would a photograph taken with a sixteen-inch lens. Now it is easy to see that the size of the objects on the etching is in exact proportion to the distance of the pane of glass from the eye; consequently, the sizes of the object in a photograph are in exact proportion to the focal length of the lens used: just twice as large with the sixteen-inch lens as with the eight-inch lens; and so for all lenses. To be more precise, we should say the conjugate focus instead of the focus, but in usual photographic work the conjugate focus will sufficiently agree with the focus for all practical purposes in the foregoing statements.

Ques.— We are sometimes told that a short-focus lens gives defective perspective and drawing. Is there anything in that?

Ans.— Nothing whatever. At the same distance, the perspective and drawing with a lens of any focus is precisely the same. If with a seven-inch lens we expose a 4 x 5 plate, and then with a fourteen-inch lens we expose an 8 x 10 plate, we will have negatives differing only in size. Make an enlargement from the smaller negative to double its size and the enlargement will register at all points with a print from the 8 x 10 negative, thus proving identical perspective and drawing.

Ques.— But as a matter of fact, we more often see defective perspective and bad drawing in photographs made with short-focus lenses than in those made with lenses of longer focus. How, then, is this fact to be accounted for?

Ans.— In this way: workers with short-focus lenses will often not content themselves with the small images given and, in order to get size, will push their cameras too near to the object or objects to be photographed, and thus get defective perspective and drawing; whereas workers with longer-focus lenses are more often able to get the size they require, at a proper distance for correct drawing and perspective. Obviously, the short-focus workers should keep back to the proper distance and be satisfied with small images; or if they needs must have larger, make enlargements from their small negatives.

Ques.— Why will any correctly-made lens produce defective perspective and drawing when placed near an object? Why will it do so, when the eye at the same distance will not?

Ans.— As a matter of scientific fact, the lens does not. The perspective and drawing of such a lens are precisely that of the mathematical requirements of linear perspective. Indeed, the perspective and drawing are the same as that refracted to the retina of the eye. But the mind, for reasons of its own, changes the perspective and drawing of actual near objects as seen by the eye. However, the mind refuses to change, or but feebly changes, the drawing and perspective when the eye gives it at second hand. The picture, whether photograph or hand-work, is not sufficiently realistic for the mind to fully change and assimilate it. Therefore, when we say the drawing or perspective of a photograph of a too near object is defective we are using the term relatively. It is not defective in truth, but in relation to the assimilation of the mind. Both the photographer and the artist in hand-drawing must keep sufficiently back so as not to offend the mind. The artist with his drawing can if he desires push further within the conventional "perspective distance," and consciously or unconsciously change the real perspective to the requirements of the mind.

Ques.— Can the foregoing answer be made plain by examples, without going too much into mathematics?

Ans.— Yes. It is quite plain that the size of objects apparently varies as their distance. A man will appear twice the size at one hundred feet that he will at two hundred. Suppose, then, we are to photograph a human face. It is found by observation that if we place the lens — it matters not what is its focus — at less than about six feet, the likeness or drawing will not be satisfactory. The reason is, the nearer features will appear in the photograph proportionally larger than will the more distant features. Now this is really as it should be in the abstract, scientific fact; but the mind will not be satisfied with the drawing of the print — it will demand the features to be in nearer scale or proportion. Yet the mind will be satisfied with the drawing if the eye receives the direct image at considerably less than the six feet. The drawing on the retina will be assimilated by the mind.

So, too, if we photograph a horse quite near-by, and standing quarteringly towards us, in the print the head and shoulders will appear much too large for the receding hind parts; i.e., the drawing will appear bad. At the same position, as seen by the eye, the horse will appear all right; also, a photograph taken in the forest will give the too near tree-trunks a seemingly proportionately greater size than those in the distance, but this will not appear to the eye as it looks at the trees at first hand.

Ques.— Now for practical results of the foregoing. In the various problems of picture-taking, how may one know how far to set the camera back in order to get perspective and drawing which will satisfy the mind?

Ans.— This is not a question of mathematics, but one of artistic judgment. Note carefully the image on the ground-glass. This image is not like looking on the scene with the eyes, but is essentially a picture, with all that a picture implies. In perspective and drawing it will be just like the photographic print. If, when carefully observed, the image on the ground-glass satisfies in perspec-

G. C. ELMBERGER
ENTRANCED
THIRD AMERICAN PHOTOGRAPHIC SALON

CHARLES TRACY THE COAL-GATHERERS

tive and drawing, then you may be sure that the print will satisfy in such respects. In taking the portrait mentioned above, you will carefully observe whether the drawing of the image is good — whether it is a good likeness. If you are critical, you will see that you cannot get what you want at less than six feet and you may prefer seven feet. In taking the horse standing obliquely, you will be sure to keep far enough back so that the drawing of all of its parts will be natural and in proportion. If you have not a lens of sufficient focus to yield the size you want, you will then resort to an enlargement for the size. If in the forest, you will be careful to avoid very near trees; or if your picture is to be with the near-by trees, then, by using the largest aperture or stop, cut off the distant objects by throwing them out of focus.

(*To be continued*)

GUST HORLIN SWEDISH LANDSCAPE

E. S. Curtis and His Work

A. F. MUHR

FOR obvious reasons it is almost impossible for one situated as I am, intimate though the relation may be, to write connectedly of Mr. Curtis and his achievements. He would never tolerate a "Bozzy," but if one were connected with him, he would be so overwhelmed with work in a short time, driven from early till late, that poor Boswell would find time for little else — except to embrace the short respite for much-needed sleep.

Curtis himself is the most tireless worker that I have ever known, and his example is so contagious that every one connected with him seems fired by the same enthusiasm and imbued with the same energy and ambition to do things and accomplish the work laid out for him.

We have seen very little of Mr. Curtis at the Seattle Studio, especially in the last two years, his time being taken up almost entirely by his work in the field, where he is busy with camera and note-book, gathering material. The short intervals at home are devoted to writing up the field-notes and the preparation of the MSS. for the forthcoming publication, "The Indians of North America." This publication will be as elaborate and important an undertaking as any ever

attempted, and will, for boldness, be a close rival to that of Audubon, nearly a century ago.

While here, besides giving some time to portraiture, Mr. Curtis sees that lantern-slides are made for his illustrated lectures, toned slides being used almost exclusively. Enlargements and other work connected with the Indian business must receive attention. Hasty consultations are held in reference to methods and ways and means to improve the work and further the business interests.

Although Mr. Curtis is one of the most genial and pleasant of men, he is extremely modest and reticent in regard to his personal experiences; he shuns notoriety. It is only when some requisition necessitates an explanation that we get any information of the numerous accidents and mishaps which are the outcome of the strenuous life which he leads in the field. If, on his return, some one expresses surprise at the particularly disreputable appearance of his outfit or the dilapidated condition of some necessary piece of apparatus, Mr. Curtis may be induced to explain to us how it happened. And it is from bits and scraps of information of this sort that I have arrived at the conclusion that nothing short of complete destruction of his camp equipment would cause him to abandon a projected trip. On one occasion his reflex camera was brought back held together by a rope tied in a diamond cinch about it, and when this was untied the camera fell apart. In spite of this, the season's work showed very few traces of the difficulty under which it had been done.

It is in things of this kind that Mr. Curtis shows his resourcefulness and demonstrates that he is naturally equipped to grapple with a subject that would tax another's patience to the utmost or compel the entire abandonment of the project. Sitting up at night to repair an outfit, by candle-light, that might seem worse than useless is evidence of the sincerity of purpose and absolute determination to carry on the work in spite of all obstacles. Every hindrance and interference is met patiently, but with the perseverance and persistence which lead to success.

On one trip he was confronted by a roaring torrent where a dry aroya was expected. He hastily converted the canvas wagon-covers into bateaux and floated the outfit across. On another occasion he risked his life to recover his outfit, that was spilled from the wagon in fording a stream.

One night they made a camp, and just as they were cooking the evening meal a cloudburst made them work in water to the waist before they could stow the outfit in the wagons, so sudden was the downpour. The rest of the night was spent on the alert, not knowing whether the waters would subside or another downpour would carry them away in the darkness. In the hottest spot in the United States he encountered death in the most horrible form. Putrefaction set in immediately, and so great was the heat that the buzzards and vultures had to be beaten off, while a rude coffin was constructed, a shallow grave dug and the remains laid away. As an offset to this he was caught in an unexpected mountain blizzard and snowbound, and held by the torrents which poured down the mountainside by the rapid melting of the snow under the torrid rays of a

E. S. CURTIS
AN INDIAN MAIDEN

tropical sun. As soon as they were able to resume the journey, a burro lost his footing and fell over a precipice, carrying his pack, containing cameras, with him. The scattered fragments were collected on the mountainside, and again assembled into a serviceable camera so the work could be carried on. These are some of many mishaps, and perhaps enough of the mechanical and physical difficulties and inconveniences to be encountered and overcome.

These, Mr. Curtis considers lightly, and nothing compared to the daily difficulty he meets in his dealings with that unknown quantity — the Indian. The qualities so necessary to success in dealing with him, Mr. Curtis possesses to a remarkable degree: tact, diplomacy and courage, which, combined with a good stock of patience and perseverance, have made it possible to succeed where others have failed. The Indian, quite naturally, is suspicious and distrustful of advances made by his white brother in overcoming the prejudices and allaying the fears, engendering a feeling of respect and mutual confidence, to make him his friend and command his good will. In this lies the secret to be able to establish that footing of absolute confidence which enables Mr. Curtis to get them to abandon themselves to the old life and forget the present and their environment. This enables him to not only get the pictures, but even the older and more conservative old fellows throw off the restraint and, breaking through the reserve, will tell things which it is so hard to learn, and so interesting to know. The most sacred rites — ceremonies which have been performed in secret and kept from the prying eyes of the inquisitive scientist — have been not only witnessed, but submitted to the camera.

There have been times when he seemed an unwelcome spectator and marked hostility was manifested; when diplomacy was of no avail, and only by an exhibition of that unflinching courage, not yielding the least ground, he not only conquered the belligerent spirits, but won them as friends. Nothing appeals so strongly to an Indian, in whom the savage instinct is always dormant, as a brave and courageous act.

During last season's work Mr. Curtis was initiated into the sacred mysteries of the rites of the Snake Priests of the Hopis. This could be done only by adoption, and he is now a son of these quaint people. He lived with them during the Nine Days' Ceremony; went with them on their quests for snakes, and to find whether his heart was good, each snake, when found, whether Bull snake, Blue Racer or Rattler, was hung around his neck. If the heart is not good the snake will bite, and as he came back to tell his experience, his heart must be good.

In the publication of his work Mr. Curtis will present the most exhaustive history of the Indians of North America which has ever been undertaken. It is to be completed in twenty volumes and twenty portfolios, each volume containing seventy-five illustrations for the accompanying thirty large pictures, all in photogravure. The proofs which have been received from a number of the plates show a remarkable fidelity of reproduction and tone value, so characteristic of the Curtis prints. The subscription-price is $3,000, and Mr. Curtis has already secured quite a number of subscribers, sufficient to warrant him in pro-

ceeding. Two volumes will be published this year — the whole work to be finished in from five to seven years. President Roosevelt has written the introduction, and the work is highly endorsed by Commissioner Leupp, of the Indian Department.

The studio in Seattle is the home of Mr. Curtis and Mr. Curtis the Indian. But a short time ago Mr. Curtis said that he had almost forgotten that chemicals were necessary for his work. All the plates are sent there from the field for development, and all the work is done there.

Mr. Curtis was long known as a progressive and successful portrait-photographer, and enjoyed the patronage and confidence of the best of Seattle's people. His work was ever marked by strong individuality, and his personality won him many staunch friends. Later he became the pioneer in half-tone engraving in the Northwest, but abandoned that to take up the Indian work. It was not only the loyalty of his friends and patrons that enabled him to keep a firm hold on his business in spite of many long absences in the field, but his studio had the reputation for a high standard of excellence. That the standard is maintained is attested by the success of the studio.

In a city at so great a distance from the centers in which it is possible to see the things which other serious workers are doing, it is difficult to keep abreast of the times, and our greatest ambition is to keep out of the ruts and not sink in the mire. Our desire, like that of all progressive workers, is for originality and individuality, and we are continually stimulated to increased effort for new effects. The colored pigment print was the outgrowth of this desire, and when Mr. Curtis showed these in the East, two years ago, not knowing what had been accomplished along these lines, the reception accorded them was most flattering and gratifying. Some of the most celebrated collectors become purchasers, and in such triumph the studio feels justified in sharing the honors with Mr. Curtis.

[Mr. Muhr is the capable and faithful manager of the Curtis Studio at Seattle, Wash.— Ed.]

GEORGE SIEGFRIED THE SCHELDE NEAR ANTWERP

Theatrical Photography

ARTHUR PAYNE

A recent issue of "The British Journal of Photography" contains a very interesting article on photographing stage scenes during public performances with no other illuminant than the ordinary stage-lighting. This remarkable achievement is accomplished by the use of a 1 to 50,000 solution of pinacyanol, as a supersensitizer, which not only increases the sensitiveness of plates bathed in it, but renders them more sensitive to red than to blue light. When one considers, therefore, that the light usually reflected from the stage is strong in red and yellow rays one will realize why the red sensitiveness of a pinacyanol-bathed plate is of great value in theatrical photography. That the speed gained is considerable, is evidenced by the fact that Mr. Payne has secured good negatives of scenes illuminated by yellow light only, by means of focal-plane shutter-exposures of from $\frac{1}{4}$ to $\frac{1}{10}$ second with a lens working at f.3. We quote below portions of Mr. Payne's article.— ED.

WHEN preparing these bathed plates, my procedure is to bathe them for three minutes in the following solution, which should not be used more than once:

Pinacyanol (1 in 1,000 alcohol)	2 c.c.
Distilled water	100 c.c.

The plates are then well washed for three minutes and wiped surface-dry by means of a pad of damp cotton, and then dried.

For this work I find it is quite safe to use a faint green safe-light, which may be of such a low luminosity that it is impossible to read the figures on a small developing-clock when it is held close to the lamp, but which gives sufficient light to enable the operator to work in comfort, even at some distance from the lamp. This does not necessarily mean that the pinacyanol-bathed plate is insensitive to green light, but rather that the physiological effect of green is much more useful than any other color. For instance, the eye itself is rather insensitive to red, so that it naturally follows that it is necessary to use a considerable amount of red light in order to be able to see by it at all. The power of the green light may be reduced to a lower degree than any of the other colors and still retain its usefulness as an illuminant. Or, to express this differently, if the luminosity of three safe-lights, red, yellow and green, were adjusted so that they are equally useful as illuminants, the candle-power of the green light would be less than that of the yellow, while the red light would have the highest candle-power of the lot.

Do not, however, be tempted to use an unnecessarily large amount of green light, but keep the light turned down to the lowest point consistent with its value as an illuminant, and shade the plate as much as possible even from the action of this faint light. It is hardly necessary to explain that the eyes are more sensitive to this faint light after the operator has been in the dark-room for a few minutes, so that he should make his preparations by means of a fairly strong green light and then lower the light when the plates are bathed or developed.

CHAS. VANDERVELDE THE MOWER

My dark-room lamp is fitted with a glass tank of an internal thickness of one inch, which is filled with the following solution:

Green Safe-Light

Acid green	2 parts
Naphthol green	2 "
Tartrazin	15 "
Water, distilled	300 "

Dilute one part of this stock solution with twenty-five parts of water, and use it in a one-inch thick cell. A sheet of ground-glass should be placed in front of the safe-light in order to diffuse the light.

It is not really necessary to dry the plates after they are bathed and washed, for I find from sensitometer tests that there is no appreciable difference whether the plate is exposed in a dry state or immediately after the surplus water has been wiped from the surface of the plate in the manner already described. Possibly in the case of the wet plate a trifle more density is obtained with equal development than when the plate is exposed dry, but otherwise there appears to be no difference in the results. I have also tested the use of wet plates in the theatre, and I find that they give good results after they have remained in the plate-holder for forty-eight hours. Three hours elapsed between preparing the plates and exposing them in the theater, and forty-five hours between exposure and development. Contrary to what might be expected, these wet plates work free from fog and more cleanly than plates which have been dried fairly rapidly. It is advisable to soak the wet plates in distilled water for ten minutes before they are developed, so as to avoid the appearance of uneven density, due to uneven development, and caused by the plates partially drying in the holders. It is, of course, better to use the plates when dry, and this I recommend whenever it is possible to prepare them in time to allow of their drying before they are placed in the plate-holder, but it may be useful to know that on special and unforeseen occasions they may be successfully exposed without waiting for them to dry.

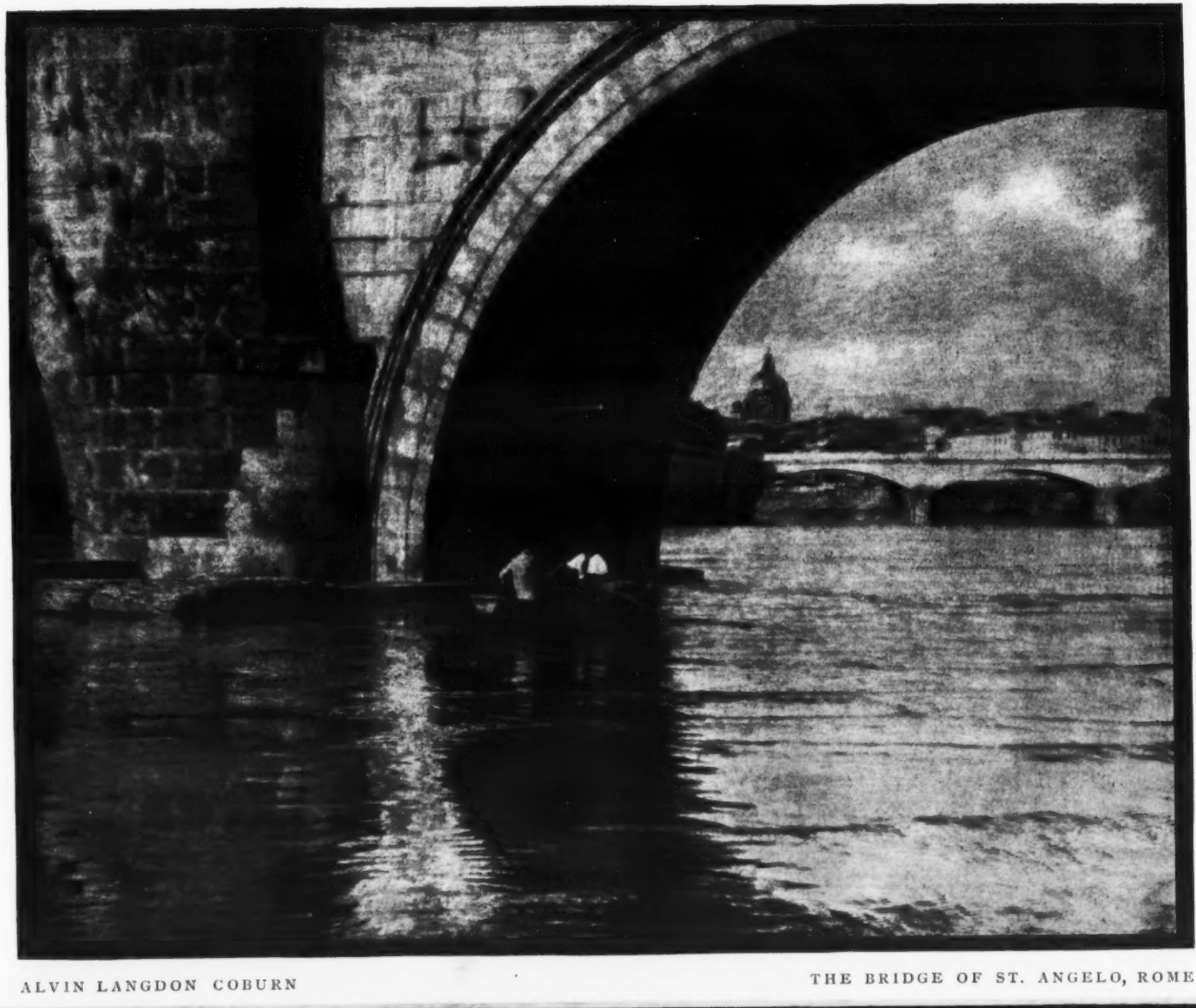
The edinol developer that I recommended for use in my previous paper was made according to the formulæ given by the makers of edinol, but it apparently contains an unnecessarily large quantity of sodium sulphite, and I find that edinol may be successfully used when compounded as follows: —

Edinol Developer

Sodium sulphite, cryst.	1 oz. avoir.
Edinol	50 grains.
Sodium carbonate, cryst.	1 oz. avoir.
Distilled water	10 fluid oz.

Dissolve the salts in the order given, and develop the plates for five minutes at a temperature of 75° F.

Taking into consideration the great red sensitiveness of pinacyanol-bathed plates, and the preponderance of red and yellow in the average stage-lighting, it ought not to be very difficult to obtain successful three-color negatives of stage scenes with a comparatively short exposure. Of course, they could not, at present, be obtained during the public performance except under very favorable circumstances, such as would arise when the theater management would consent to hold the curtain for five or six seconds on the "call" at the end of the act, and the performers would pose for the photograph. Taking into consideration the value of color stage photographs as an advertising-medium for the proprietors, they might arrange for a special production in order to obtain a series of three-color photographs of a pantomime or other spectacular play. I offer the idea to those who are interested in this work, and suggest that it is a proposition which might be brought before the notice of theatrical clients.



ALVIN LANGDON COBURN

THE BRIDGE OF ST. ANGELO, ROME

WM. S. RICE — AN APPROACHING STORM ON ALPINE LAKE

With a Camera in the Sierra Nevadas

WILLIAM S. RICE

WE had always been looking forward to a camping-trip which would combine the charm of picturesque scenery with that of a bracing climate. Insisting from the start that our camp must be within easy reach of snow-capped peaks, we were yet unwilling to locate at such an extreme altitude that we should miss, entirely, the warmth of summer. To find the ideal place which should combine all of the above-mentioned features was not an easy task — especially to novices who were not acquainted with the lay of the land, so to speak.

My reasons for preferring a high altitude were twofold: I wished to be near the region of eternal snow, so that the nights should be cool and bracing and invite sound sleep, and the noontide not too hot for comfort or the exertion of mountain-climbing. Moreover, I wished to make a study of the mountain scenery and flora with the aid of the camera; and the thought of lugging a heavy instrument through the brush a great distance from camp did not appeal very strongly to my æsthetic sense.

Our party consisted of the "Photographer," his sister, the "Cook Lady" and the "Boy." The ideal spot that we at last decided to select for our camp-site was located on the banks of Bear Creek, a tributary of the Truckee River, about

three miles from Lake Tahoe. A mountain stream, clear as crystal and cold as ice, sang us to sleep at night with its crooning lullaby, as it hastened on its tortuous course over mossy rocks and through deep, amber-colored pools to the Truckee beyond. We were fortunate in being enabled to make our entire journey aboard the iron horse, instead of the slow-moving stage; and in consequence we reached our destination with little or no discomfort *en route.*

What fun it was unpacking our outfit, arranging our table and cupboard and, finally, erecting the tents! We selected a level spot under a giant tamarack-tree for our dining-room, which was carpeted with a thick layer of brown pine-needles. The babbling brook flowed near-by and all about us towered giant silver firs, tamaracks, yellow pines and quaking aspens.

Of course the Cook Lady was anxious to get her domain in working-order the first thing on the program; so, after the tent-sites had been selected and piles of fir boughs had been gathered for mattresses, she insisted that "all hands must get busy on the appointments for the culinary department." First, the little sheet-iron camp stove was placed upon a firm foundation made of boulders. That was the Boy's duty. The stove seemed so diminutive that we were nearly convulsed with laughter at its absurd appearance. It so resembled a child's toy that we were doubtful as to its practicability. After the merriment had subsided the Boy offered the next suggestion: "Now for the table and cupboard!" he said, for he was beginning to feel the first pangs of hunger that the mountain climate was rapidly developing in all of us. A table was made by hammering four stakes

WM. S. RICE ALPINE PHLOX (PHLOX DOUGLASII)

WM. S. RICE CALIFORNIA AZALEA

in the earth and nailing one of the packing-boxes over them. When covered with a square of oilcloth it presented a real homelike appearance.

Our larder was likewise constructed from a packing-box which was nailed to a tree and stocked with innumerable tins of corned beef, salmon and vegetables. There were trout in the stream, and the Boy, by being energetic with his rod, supplied our table with many a mess of the speckled beauties.

What jolly times we had evenings, when the various campers who were located in the vicinity gathered around our big camp-fire to relate the varied experiences of the day! During the course of the evening, like a strange voice in this wilderness, came the strains of "Tenting on the Old Camp-ground" and "In the Vale of Shenandoah" from the brassy throat of a phonograph which one of the campers had thoughtfully included in his outfit. Its notes sounded strangely "civilized" to our ears, accustomed only to the murmurings of the brook in that vast wilderness, but there were times when it enlivened odd moments that otherwise would have been rather dull.

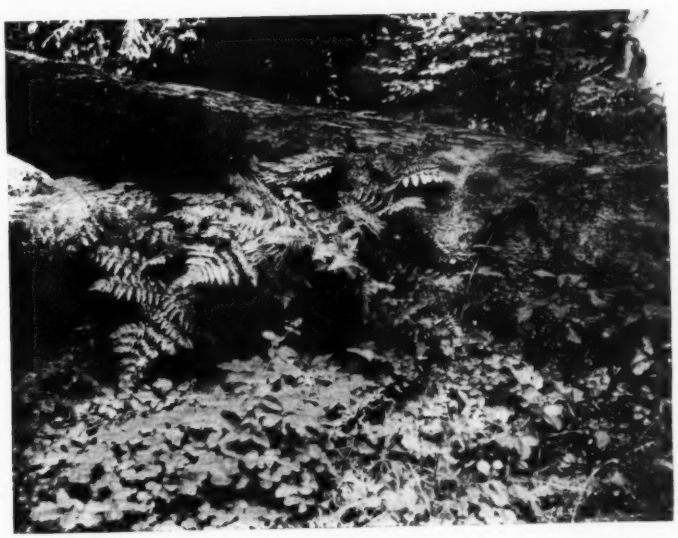
There were two cameras in our party, and a good store of Medium Isochromatic plates for the 5 x 7 instrument and films for the 4 x 5 snap-shot camera. I chose this special brand of plates, anticipating snow-scenes and grand cloud effects, and I also included a color-screen in the outfit. The portrayal of wild-flowers in their native haunts was another purpose for which I intended using them during this outing in the Sierras.

Several delightful excursions were made, during various times of the day, up the mountain-sides, where, on bleak, rocky ledges, wild-flowers of indescribable hue grew in the greatest profusion. As we climbed ever higher, the grand panorama of valley, pine-fringed ridges, rocky crag and snow-crested peaks spread out before our enraptured eyes like a vision of Paradise; and a Paradise for the camerist it proved to be in reality.

On one of these trips we wandered up the ridge where, hemmed in by giant granite battlements, nestled a chain of five mountain lakes fed by the melting snows and reflecting, like mirrors, the intensely blue sky and the surrounding forest of fir and pine and the grand white peaks beyond. At the sight of all this wealth of picturesque beauty wherein "compositions" were made to order while one simply waited to refill one's camera with plate-holders, my enthusiasm knew no bounds, and I exposed plate after plate in a reckless fashion, using the color-screen where clouds, or shadows in the snowbanks, were wanted in the negatives. The atmosphere was intensely pure and the light powerfully actinic in these great altitudes, consequently no exposures were made longer than one-fifth of a second when the color-screen was used, and one twenty-fifth of a second without it. Such exquisite pictures as these lakes made! Nestling there, with their grand setting of still higher ranges back of them, with fringes of verdant pines and melting snowbanks down to their very brink and imaged in their sapphire waters, these mountain lakelets were truly gems of the Sierras!

Out on barren, granite ledges we found the mountain flowers in bloom, reveling in the vernal season which, to them, had just begun, although according to the calendar it was then mid-July. In the places where snowbanks had recently been we gathered dainty white violets, alpine phlox and heather, and photographed them in their native surroundings. In the lush, green meadows of springy depressions moistened by the melting snows were thickets of alder and willow amidst which gleamed the brilliant-hued alpine lily, of a deep orange vermilion, monk's hoods of cobalt blue, while columbines and shooting-stars disported themselves in the damp grasses. These shooting-stars are some of the prettiest and daintiest of mountain flowers; and it seemed to us that Nature must have taxed her skill to its utmost to produce something unique when she fashioned them. In the same locality we found several members of the orchid family. Most beautiful was the milk-white rein orchis, which reared its frost-like spikes effectively against the plush-like green of the mountain meadows.

Out on exposed, sunny slopes I came across a colony of mariposa lilies, sunning themselves airily and daintily upon their wire-like stems. The delicate petals were cream-colored, with a triangular blotch of lilac; and a hairy spot of yellow near the base formed a cup wherein insect guests were frequently found regaling themselves upon the nectar. We found some of these lilies afterward that were yellow, claret, magenta and variously blotched with crimson and purple. In the thickets we found the pure and exquisite Californian azaleas in bloom. Their dainty Japanesque forms relieved against their glossy, green foliage immediately set my photographic pulses leaping with sheer admiration for



WM. S. RICE
MOUNTAIN IRIS
BRAKE FERNS

their wonderful decorative possibilities. Their dainty perfume, so characteristic of the damp woods, seemed distilled from the very leaf-mould at their feet!

The early morning hours were selected for studies of this flowering shrub — a time when the air was perfectly still. After focusing sharply upon the main spray of interest, which, by the way, required considerable time to decide upon, the diaphragm was stopped down to 32, or until all portions of the main spray were brought out sharply and clearly upon the focusing-screen; then waiting, bulb in hand, until not even a zephyr stirred the leaves or flowers, an exposure of one-fifth of a second gave the desired results. Groups of ferns, in dim, shadowy thickets where the light flickered through in innumerable spots, just ruinous to time-exposures (in which they look like patches of snow or cotton-balls), were best photographed on hazy days when the light was evenly distributed. Stopping the lens to about 20, an exposure of 10 seconds was satisfactory for places with medium illumination; for others more in the gloom of fir shade 15 to 20 seconds were given. I secured several very pleasing results wherein a faint ray of light played upon the most prominent ferns in the foreground of the composition, thus relieving it a bit of monotony.

The protrayal of wild-flowers in their native environments is a photographic pastime less exciting than that of depicting the doings of wild animals and birds, but the enthusiastic Photographer and the Boy found plenty of exciting experiences clambering over the edges of slippery rocks and getting their feet soaked in rushing mountain torrents to satisfy them for days to come. The photographing of the flowering shrubs did not present so serious a difficulty, and was found to be comparatively easy to manage; but with the low-growing blossoms like the snow plant, mountain iris, orchid and mariposa lily, great patience and perseverance were required in the focusing. Focusing at so close a range and so low an angle, and the wind, that ever-present enemy of the botanical photographer, were the three main factors to contend with; so, taking every drawback into consideration, we had all the excitement that we bargained for.

Nature here in this picturesque place was so primitive, so fresh from the hand of the Creator, that we could almost feel her pulses throb on every side. We felt that this photographic Eden was almost a place where gnomes and fairies must hold their carnivals — an enchanted forest, as it were, where the creatures of the wood, the birds of the air and the vivid blossoms at our feet, lived an ideal life without fear of being molested.

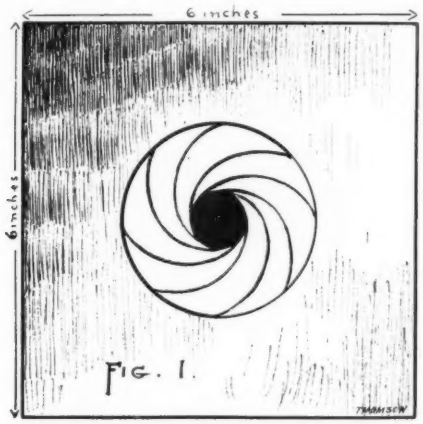
In that region of blue skies, cool air and high altitude, many were the feats of physical endurance that we accomplished, which at that season in the lowland valley would have been simply impossible. With perfect days, cold, bracing nights, delicious mountain ozone and the purest of water, we felt that living the free outdoor life and "roughing it" was doing us all infinitely more good than all the tonics in the world.

When the day came for us to break up camp and return to the haunts of men, and to the every-day duties we had laid aside all these blissful days, there was a genuine regret felt in all our hearts.

Mirror Reflecting Cameras Antique and Modern

JAMES THOMSON

NOT many of the present generation of photographers are familiar with the *camera obscura*, that primitive instrument with which the fathers of the art were obliged to content themselves. In the year 1816 we find Nièpce describing his camera as a box six inches square, with an extensible front carrying the lens, and an iris diaphragm, identical, in principle, with those in use to-day, as examination of an illustration will disclose, the camera being at present in the Chalon Museum, France.



A NIÈPCE CAMERA OBSCURA
SHOWING IRIS DIAPHRAGM, 1816

The invention of the *camera obscura* we owe to Giambattista della Porta (1540–1615). It can therefore be seen that mirror-reflecting instruments were in use many a long year before the advent of photography. Beautiful as the photograph sometimes is, we may be sure the image, as revealed on the ground-glass, in all the glory of color, was still more beautiful. Man, beholding the glorious image on the ground-glass, sought for some means to fix it. Hence the invention of photography. The artist, moreover, seeing the image, found in the *camera obscura* an aid to carrying out his ideas. Thus with pen or pencil he could delineate the image of nature thrown on the ground-glass, much as do children of the present generation draw on the transparent slate.

Some nine years ago chance put in my way an odd-looking box, which I quickly recognized as an old-time camera. Part of a New England attic's treasure, it had been all but discarded, for no one in charge had the slightest notion as to its original purpose. My own interest in photography, however, was sufficient

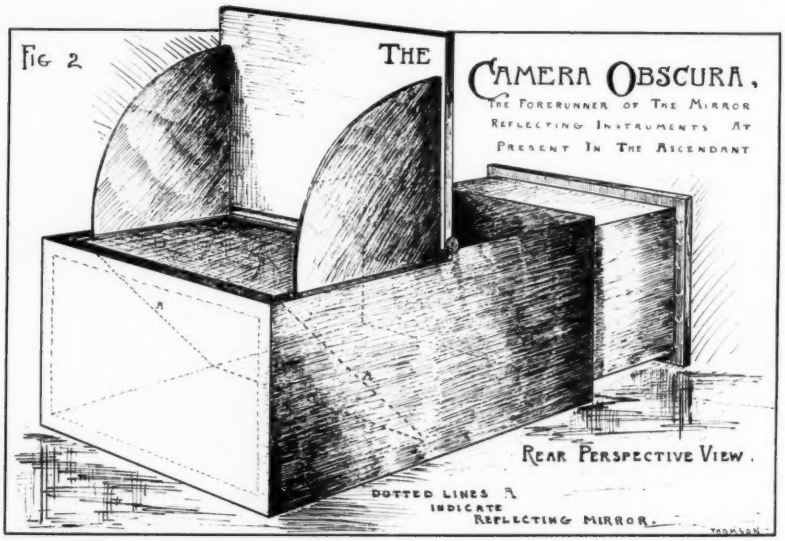
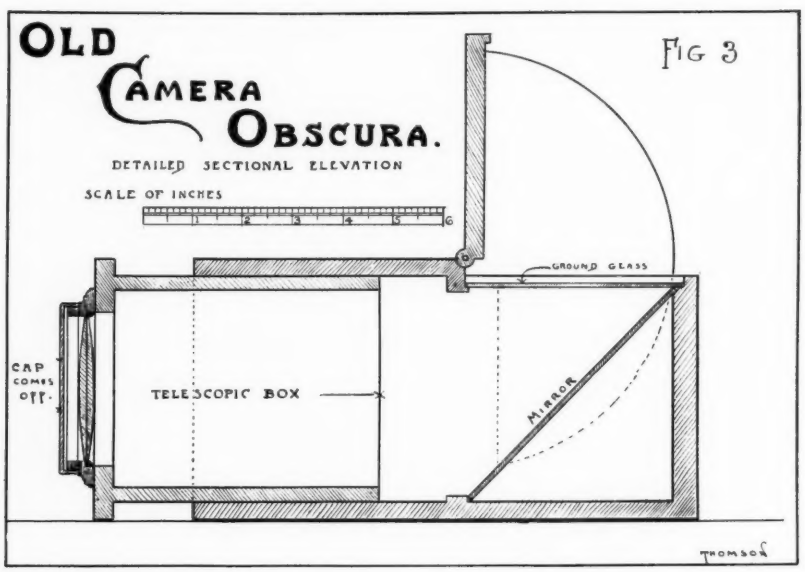


Fig 2
THE
CAMERA OBSCURA,
THE FORERUNNER OF THE MIRROR
REFLECTING INSTRUMENTS AT
PRESENT IN THE ASCENDANT
REAR PERSPECTIVE VIEW.
DOTTED LINES A
INDICATE
REFLECTING MIRROR.
THOMSON


OLD
CAMERA
OBSCURA.
Fig 3
DETAILED SECTIONAL ELEVATION
SCALE OF INCHES
1
2
3
4
5
6
GROUND GLASS
CAP
COMES
OFF.
TELESCOPIC BOX
MIRROR
THOMSON

to rescue it from the ash-heap, and, as may be seen, the little pains I took in repairing it amply repaid me.

In plan this camera was a box within a box, one box sliding within a larger one. At the front end was a three-inch double-convex lens, while at the rear, on the top, was a removable piece of ground-glass. Inside of the box, immediately beneath the ground-glass, was a mirror placed at an angle of 45.° When the camera was pointed at an object, the view, first reflected in the mirror, was thrown upward on the ground-glass. Thus, by removing the latter and substituting a sensitive plate, a photograph of the scene could be taken.

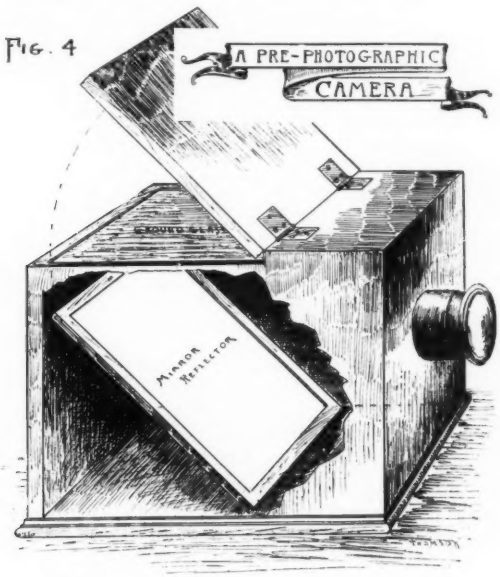


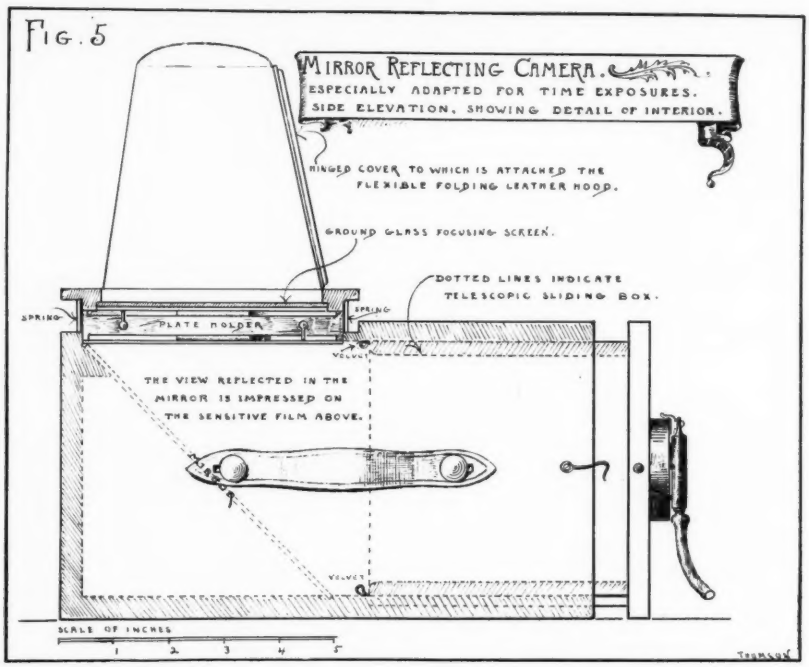
Fig. 4

The entire affair was remindful of the present-day view-finder on the average camera. In fact, the finder of to-day is but the *camera obscura* in miniature.

Much dilapidated as was the camera, I made the necessary repairs, and, simply to satisfy myself that the deed could be done, I took some very fair pictures with it.

Advanced workers are familiar with the present-day instruments of the reflecting type, cameras almost indispensable where rapid movement is involved. Some have claimed such cameras as a proud asset of twentieth-century achievement, when, in truth, the mirror principle is very old — abandoned for a time, only to be taken up again, and in an improved form.

The high cast of present-day reflecting-cameras operates against their employment. As there is no patent on the mirror device, it seems singular that some manufacturer does not place a reflecting-camera on the market at a popular



price. Looking at the image on the focusing-screen on the top, we see it the full size of the plate employed, and right side up too, not inverted as is the case with cameras of the usual kind. It is, therefore, not a difficult matter to arrange for the use of a plate on the top of the box, instead of at the rear as is the accepted fashion, the reflecting-feature, of course, being also part of the scheme. In cameras of the cycle type the ground-glass focusing-screen, being placed at the rear of the box and actuated by stout springs, gives way for the insertion of the plate-holder. Once the latter is in place, the sensitive film of the plate will be on the plane formerly held by the face of the ground-glass. Such being the case, to arrange for a camera of the reflecting-variety one needs but change the ground-glass from the rear end of the box to the top. Nor would it require much ingenuity to arrange matters so that the act of inserting the holder would operate to close the shutter, when, as might sometimes happen, it were inadvertently left open.

The camera here pictured gives barely a suggestion of its possibilities. It is intended solely for timed exposures, although with little difficulty it could be arranged for rapid work also, in which case the plate-holder would be, as is usual, at the rear, and the mirror be made to vanish upward, as in the case of the Reflex. In that arrangement some sort of roller-blind shutter, working close to the plate, would be imperative.

The focal length of the lens used necessarily dictates the dimensions of the box, in so far as length is concerned. In no case should the focus be less than one and a half times the long way of the plate, while twice the length of the plate would be better for pictorial photography. The focal length of the lens we measure from the lens to the mirror at the top of the incline, and not at the bottom as some might imagine.

The proposed camera is intended for a 4 x 5 plate, and, as can be seen, the view to be taken landscape fashion. For upright pictures the plate-holder would be arranged for insertion from the rear instead of the side. The mirror, however, must always be placed at the same angle, 45.°

While we have arranged for the old-time telescopic box, the regular, present-day bellows may be substituted. The flexible leather portion of the hood attached to the cover over the focusing-screen is arranged so that it will be snugly disposed of in the space over the ground-glass. It is somewhat difficult to explain on paper how this may best be effected, but examination of some similar instrument now in use may disclose the secret.

While I intend to construct some such mirror instrument as is here suggested for my own use, I here present such ideas as I have for the benefit of others. In my own case, I purpose using a rapid, rectilinear lens, but a single achromatic objective would answer reasonably well.

As the high cost of cameras in which the reflecting-mirror is a feature is a bar to their extended use, amateur workers should feel encouraged to make something of the kind for themselves, especially as in the camera of the mirror variety the difficulties are no greater than in the ordinary type. No patent stands in the way, the reflecting-mirror placed at an angle of 45°, as here shown, being older than photography itself.

My camera is especially arranged for time work. All the cameras of the mirror-reflecting type already on the market are adapted to speedy work. The use of an anastigmat lens of short focus enables one to work at a large aperture, and while the resultant pictures are of excellent quality, they have the faults inherent in all of the short-focus product. In pictorial photography a long-focus lens is essential, and for such a lens we must have a camera with a long draw. The average low-priced camera has too short a draw, so we may well make a long-draw box of the kind here pictured for a change.

Speed is the desideratum in the mirror camera, as a rule; but where time exposures alone are involved the need of seeing the view, up to the moment of opening the shutter, is not so apparent. Once the focusing has been effected, there is ample time to change the stop, when necessary.

In the early days the cap was constantly employed; nor is there now any reason why we should not resort to it more than we do, under-exposure being still common enough. Not one in a dozen gives sufficient exposure, notwithstanding rapid plates and perfect lenses. Plenty of time, therefore, should be accorded the focusing and exposure, quite regardless of our means of shutting off the light.

~~Laymen~~ Women, as a rule, take the greatest pleasure in looking at the variegated images presented for their edification on the ground-glass screen of a mirror-reflecting camera. For these picture lovers, however, no such instrument as the old-time *camera obscura* can now be bought. To view the passing scene of a busy, modern city street through the medium of the ground-glass of a reflecting-camera is a pleasure to many, appealing as it must to the invalid and shut-in, particularly. There is no missing of the hair from a focusing-cloth, while the view is, as in nature, right side up.

The accompanying illustrations may require a word. Fig. 1 needs no explanation, Fig. 2 is a rear perspective view of my find, while Fig. 3 is a detailed plan of same.

Fig. 4 shows an eighteenth-century pre-photographic instrument, and Fig. 5 embodies some ideas for a mirror-reflecting camera where time exposures alone are required. The germ of the idea being here presented, suggestions for improvements are in order.

While the pictorial image as presented to our vision on the focusing-screen of the reflecting-camera is right side up and not, as is customary, inverted, it should be understood that the right and left of the view are reversed. Photographing, therefore, with the plate on top of the box, as suggested, involves such a condition, which, for ordinary pictorial purposes, would not answer. This difficulty, however, may be easily overcome by the simple expedient of reversing the usual order of loading the holders. We simply are required to turn the sensitive film in instead of, as is customary, out, thus photographing through the glass.

Workers who have inadvertently done this very thing assure us there is thereby no falling off in the quality of the resultant negative. In fact, some go so far as to claim thereby certain benefits, such as less liability to halation, etc. We must, however, take cognizance of altered conditions in arranging focusing-screens, lest the image be not as sharp as it ought to be.

GEORGE SIEGFRIED — THE PIER AND THE STEEN

J. E. MOCK
LADY VERE DE VERE

Ozobrome in Pictorial Photography

H. D'ARCY POWER, M.D.

PREVIOUS writers have already acquainted the readers of PHOTO-ERA with the nature and mode of working Ozobrome. I purpose in this communication to say a few words on its relation to pictorial work, together with some hints based on experience in its use.

The great desideratum in a process to be used for pictorial purposes is that it shall permit the product of the negative to be modified. Furthermore, it is desirable that it reproduce without loss the full gradation of the negative and allow of choice in color and surface. Let us consider these points a little in detail. The pictorialist desires to produce a picture, that is to say, an arrangement in masses, lines and possibly color, that shall be a source of pleasure to the cultivated taste; if he be also an artist, he will in addition desire to express his own mental conception of the thing portrayed. The pictorialist's aspirations are very occasionally realized by a direct transcript from an untouched negative — the artist's, never. The best that can be said of the mass of technically perfect negatives is that they yield good drawings and now and then crude pictures — crude because the values are unavoidably false, the massing rarely what an artist would desire, and the great principle of simplicity and unity, without which dramatic effect is impossible, is constantly violated by scattered high-lights and excess of detail. Furthermore, the tonal scale of the negative is too short to make record of what the eye sees and the painter readily transcribes. For example, take a foreground of trees backed by three receding planes of hills bathed in light and note what will become of the distant planes in a straight photograph. Yet the very essence of such a scene lies in the beauty of the distance. Therefore, to produce pictures by the aid of photography, we must be able to correct the negative (a very difficult and usually impossible undertaking) or we must have the power to modify the print, that values may be made true, lost planes recovered, offending high-lights and obtrusive details obliterated, and undesirable lines modified. Much of this is necessary in the interest of truth; more, for the creation of beauty or the expression of the artist's conception. Now all who have sought to use the camera as an artist uses the brush have quickly discovered that, if success is to be attained, the artist must modify the print rather than the negative, and that the only printing-processes that admit of modification, without a crude exhibition of the intervention, are those known as pigment processes. All pigment processes are dependent on the principle that gum, gelatine or some similar colloid substance, when mixed with soluble bichromates, can be rendered insoluble by the action of light and, also, as we shall see, by certain chemical substances. If the gelatine, etc., be mixed with pigment, this latter is immeshed in the insolubilized mass. This mixture of pigment of any desired color and colloid forms the image in all pigment processes, and may be produced on or transferred to any kind of surface, from polished glass to shagreen leather.

All other printing-processes used in photography depend on chemicals that are intimately blended with the texture of the paper, from which they cannot be mechanically removed, but a pigment print consists of solid particles lying on the surface and held thereon only by the gelatine or gummy colloid. Hence, by me-

H. D'ARCY POWER CITY VISITORS

chanical means, irrigation with water, or abrasion with a brush, the image may be largely changed at the will of the operator. In gum-bichromate this power of modification is unlimited. In the carbon process it is much less, but still very considerable. Ozobrome is practically a carbon process, but more amenable to modification than the ordinary form. Let us examine this statement. The modifications most commonly required are, first, changes in the scale of gradation

WM. C. STARR A MEADOW STREAM

— that is, the contrasts of light and shade require accentuating or diminishing; second, alteration of certain values, either in broad planes or small masses — for example, one of the picture planes is too light or too dark, or a single object is falsely rendered, a shadow is lacking in depth or a high-light in force; thirdly, foreign lights need eliminating — thus pinholes in the negative give black spots, and false reflections from the curved surfaces of leaves, etc., give numerous scattered high-lights, that are hopelessly false in value and distracting in effect; fourthly, offending lines and masses caused by details that cannot be eliminated from the negative, such as telephone-poles, surface-car rails, etc. Now the first three of these groups are easily handled by the worker in Ozobrome, and much can be done in the fourth group. Let us take a concrete example. The accom-

WM. S. RICE THE SPINNER

panying picture, "City Visitors," was worked out in advance of the exposure, the location of the leading lights determined, and also the desired position of the dogs. Many were the attempts at inducing these unruly models to occupy their allotted places, and when they did get into line it was impossible to give more than a one-twenty-fifth second exposure. This meant an underexposed negative, short in gradation, with the sky-light too high, the shadows so dense that the limbs of the trees were mere silhouettes, the distance too dark, and many scattered high-lights; furthermore, the scale of gradation was so short that the negative had to be kept thin, with the result of a flat print. Now let us see how Ozobrome can

handle such a negative. A bromide enlargement was made on a soft-working paper, to preserve the largest possible amount of gradation, the printing being carried just far enough to give detail in the high-lights. After drying, an Ozobrome transfer-print was made. I will give the exact technique, as it differs in points from that of the directions. The bromide print being somewhat flat, a weak sensitizing-bath was used; viz., one to four of water, where in the pigment plaster was immersed for one minute. Next to this bath were placed two trays containing water, and beyond the third tray a sheet of glass with a sheet of blotting-paper and a sheet of thin celluloid lying handy. The bromide print was placed in the third tray, together with a sheet of thin white paper half an inch larger than the print. When limp the thin white paper is placed on the glass plate and the bromide print superimposed face upwards. The pigment plaster is then removed from its bath, passed through the adjacent dish of water and brought in contact with the bromide print, lowering it from one margin and on no account allowing it to slip sideways as it comes down. Over this place, first, the opaque sheet of blotting-paper, then the celluloid, and, holding the latter firmly with one hand, pass the squeegee lightly over the surface, then remove the blotting-paper and, with merely the thin celluloid covering the plaster, squeegee firmly in a single direction. After waiting the usual time, the plaster is transferred to its permanent support and finally developed with warm water. It is at this point that the most important tonal alterations are possible.

In our example we desired to lighten the distance, darken the shadow-masses on the left, and accentuate some of the high-lights on the water and stones, in order to develop a curved line of light passing from the base line upwards and inwards to the point of interest. This is first of all to be effected by the careful and individual development of each of these regions. If the water is very warm, development will occur simultaneously over the whole surface and we shall have no control. So we use water about 90 degrees Fahr., and leave the print in it until the mass is quite soft but not detached. Then, raising the print on a glass or zinc plate, we incline it away from the shadow side and commence development by directing the stream of water on the sunlit distance until all the pigment desirable or possible is removed. To this end, it may be necessary to use water of a higher temperature, care being taken that none of it goes over the shadow-masses on the left. The water used in developing the light center will, in running off, have developed the right side of the picture. If not complete it is now finished and development of the shadow side completed. This is done with water *only just sufficiently* warm to remove the excess of soft pigment. Directly this is effected the further loss is stopped by immersing in cold water. These procedures will have greatly altered the appearance of the print as compared with the original bromide: the sunlit distance is brighter and the light better concentrated; the shadows below the great tree on the left are deeper and the line of high-light striking the bridge on the left and forming an unpleasant line running out of the picture is buried under unremoved pigment. We now need to put in individual high-lights. Owing to the necessarily short exposure, the tree-stems

against the light are absolutely flat. We take a sable hair brush, No. 10, and, placing it for a moment in hot water, pass it along the upper border of the stems, where the light would naturally strike, and immediately the pigment comes away and the limbs acquire rotundity and modeling. This should be done with the picture inclined toward the shadow side of the branches, so the displaced pigment may run in that direction and add to the depth of the shadow. Working in the same way we remove pigment from points along the bed of the stream, so as to develop the line of light we had previously determined on. Our picture is still marred by scattered high-lights. To remove these we wait until the print is surface-dry and then we obliterate them with a little of the pigment dissolved off a piece of tissue by means of hot water. The light in the sky is somewhat too high and competes with the high-lights which accent our center of interest below. A wash made in the same way puts matters right, and we have a print that is much truer to nature as well as more conformable with the principles of pictorial effect than the original bromide from which it was made. The example here used did not require the actual obliteration of any well-marked lines such as telephone-poles; but in cases where this is necessary the best method of procedure is to effect the main alteration on the original bromide. With a little cyanide and iodine reducer, applied in minute quantities with a brush, we reduce the shadows on the offending objects to the general depth of its suroundings. We wash and dry the print and then proceed to darken the high-lights by stippling until they also equal the surrounding values and the object has disappeared. The stippling is done with an emulsion of reduced silver made by adding a little potassium bromide to a few drops of nitrate-of-silver solution and adding a few grains of a developer, such as amidol or metol. The quick way to make it is to wet a dry-plate and then warm it, when the emulsion can be run off into a bottle; a few drops of developer reduces the silver and it is ready for use. This reduced silver acts in just the same manner as the silver of the image and equally reproduces itself on the Ozobrome print. Furthermore, work that appears crude on the bromide is perfectly blended in the Ozobrome. This same solution can be used for spotting the bromide instead of leaving that procedure to the end. In cases where many copies are required this saves much trouble. From the above it appears that we have in Ozobrome, if not the unlimited latitude of gum-bichromate, a plasticity sufficient for most extensive modification. In the matter of gradation it cannot compare with a direct carbon print, but as compared with a carbon print from an enlarged negative it has better gradation; for in making such negatives more half-tones are lost than in the production of a bromide enlargement. As we can make the Ozobromes on paper or canvas of any tint or surface, and, furthermore, the colors now on the market are open to modification by the usual carbon toning-processes, it is evident that we have all the elements for the successful pursuit of pictorial photography on a basis of simplicity hitherto unattainable. To these facts must be added the great boon of easily obtaining a large picture from a small negative. There are also many other possibilities latent in this process to which I cannot at present refer.

EDITORIAL

Fraud Upon the Eyes

IT is a generally admitted fact that in the nervous eagerness to keep pace with hurrying events we Americans lose sight of health, safety and education. One of the chief things so sadly neglected is the care of the eyes. A whole volume could be written dealing with the constant abuse of the blessed gift of sight, and the thoughtless methods adopted to cure or alleviate resulting troubles.

It is no uncommon thing for well-to-do persons to purchase eye-glasses or spectacles which, on account of their inadequate material and abominable workmanship, are unfit for use. The amount of injury they impart to the most precious of the senses is very great, and frequently results in total blindness. This state of things is due as much to ignorance as to a false idea of economy; for, were persons really aware of the danger they incur when buying glasses which, instead of correcting visual defects, simply aggravate them, they would first seek reliable advice on so serious a matter as the eyes.

But, happily, the science of ophthalmology has made wonderful progress in recent years, and diseases of the eye, formerly beyond the possibility of cure, today yield easily to the rare skill of the oculist. More care than ever is exercised also by the optician in constructing and adjusting eye-glasses, and he should work strictly in harmony with the oculist who prescribes the formula for the glasses to be worn by the patient. Let it here be remembered that it is not always safe to entrust to the optician the important task of examining the eyes and then supplying glasses for them, for he is liable to err in his judgment and thus make matters worse. Almost any person should be able to afford the moderate fee due the oculist for a scientific examination of the eyes, and there are dispensaries — in charge of able specialists — for the impecunious.

But another menace to the safety of human sight is the very cheap and inferior opera-glass, few people realizing the destructive power that lurks within some of these dainty and handsomely-mounted instruments. The low price demanded for these baubles ($2.00 to $3.00 each) little more than pays for the mother of pearl, which forms the chief attraction, and the cheap labor spent upon them — for they are "made in France"— whereas the principal (optical) element, the lens, has little or no practical value.

There may be some excuse for curbstone pedlers to carry a line of cheap optical goods, partly due to the lack of technical knowledge of their properties; but there is positively no reason why opticians should engage in the traffic of these breeders of astigmatism and muscular weakness, and one naturally does not expect to encounter impositions in the stocks of such merchants. We look upon the sale of such wares as nothing less than a crime, and will gladly support any movement which shall put a stop to it. If persons are afflicted with weak eyes, so that they cannot fully enjoy a theatrical performance, let them first ascer-

tain if they require eye-glasses, for opera-glasses are not intended to take their place. If an opera-glass is desired, let the first thought be its optical properties, rather than the consideration of its external appearance. An important point to be remembered in this connection is that the distance between the eye-pieces (from center to center) *should correspond exactly with that of the pupils of the eyes* — technically known as "the interpupilary distance." This item is, therefore, of serious import, and should be as familiar to a person as his height or weight. The average interpupilary distance in men is $2\frac{3}{8}$ inches; in women, $2\frac{1}{4}$ inches.

The opera-glass thoughtfully provided by the management of a theatre is a manifest convenience, but unfortunately it fits the eyes of only a relatively small number of patrons. The difficulty will be remedied when the variety, known as the jointed bar opera-glass, is installed. A scientifically-made glass of this type, in plain, japan mounting, retails at about $8.00; the kind in ordinary fixed mounting at not less than $4.50. The increase in price represents the quality or character of the mounting, or workmanship of superlative excellence as characterizes the productions of the world's leading optical firms.

Our Friends — the Extremists

A GERMAN cotemporary, disturbed by the utterances of certain periodicals championing the cause of the ultra-impressionists, sounds a note of warning to his government. Impressed by their vehement derision of photographic detail, he seems to fear for the safety of art-treasures in the picture-galleries of Berlin, Dresden and Munich, which are rich in works by Dow, Netscher, Mieris, Van der Werff, Preller — masters of a school whose peerless artistry was born of rare devotion to noble ideals. Our nervous colleague appears to regard it as not at all improbable that a band of these fanatics will rush into his country's art-museums, and, à la Carrie Nation, attempt to destroy the objects of their wrath. True, these examples of a charmingly realistic style have not been molested by the disciples of Monet, Pissarro and other master-impressionists; but there is no knowing what may be expected from a zealot incited by the malodorous exhalations of putrid gum.

It might be well, here, to ask a question or two of these wanton destroyers of photographic detail. What satisfaction, if any, would one of them derive from a musical performance in which the intonation was impure; notes omitted, here and there; rhythm distorted, and other offences committed? And music is one of our sister arts! The same laws that govern music govern the other creative arts: poetry, painting, sculpture, engraving — photography.

Or to go one step farther, how would he enjoy Dvořák's "Humoresque" played on a squeaky violin, or a Chopin nocturne given on a discordant pianoforte? Or, would his soul expand while listening to Gounod's "Ave Maria" delivered in a voice thin, shaky, and off the key? These are the vehicles of expression. They are but instruments — corresponding to the working-tools of the photographer. Give an expert gunner a poor weapon, and he is handicapped — unable to give a good account of himself.

THE ROUND ROBIN GUILD

Conducted by ELIZABETH FLINT WADE

A department especially designed for the amateur photographer and the beginner, in which information, advice and criticism will be freely given. Membership may be obtained by sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston, Mass.

THOUGH we have scarcely forgotten the face of winter, yet the year is already in its middle age. July is the calm zenith of the year, and it is special wisdom to rejoice with this brilliant cotemporary while she is here. We ought to go out and enjoy the fragrance of her flowers, lie under her trees, touch with lingering finger her reeds and grasses, and learn the beauty of her floating clouds, her mystic shadows, her elusive moonlight.

July is the month in which the amateur who loves out-of-doors and out-of-door pictures never steps forth on any pilgrimage, however short, without taking with him his beloved camera.

This is the reason why we have chosen landscapes as the subject of our July competition. And we want real pictures — not snap-shots of uninteresting scenes. The pictures must not only be good technically, but have artistic merit.

In order to make an artistic picture one must make use of his knowledge of the elementary principles of light and shade, and so subordinate the insignificant details of the scene as to produce a picture not only correct in its composition, but rendered harmonious by the breadth of its atmospheric effect.

One knows how an artist looks at a scene. He half closes his eyes so as to view the landscape through the veil of his eyelashes. Looked at in this way, the important features of the view are strongly marked, and one sees the broad masses of light and shade, instead of the broken lights and shadows scattered here and there. Now this is what we desire to have our Guilders endeavor to obtain in their landscapes. Get the breadth and harmony of the scene, and as far as possible eliminate or subdue minor details.

Early morning hours are the ideal hours for a July landscape, while the dew lies heavy on the grass and the mists are rising from marsh and meadow. Do not try to make a picture which shall show every separate blade of grass and every individual leaf on a tree, but strive to represent the scene as the artistic eye sees it as a whole, minus immaterial details. By using a large stop and — after first focusing sharply — turning the lens outward just a trifle so as to blend without blurring, one gets an atmospheric effect which many strive for and few obtain.

The question of lights and shadows in a landscape is one of the most perplexing for the amateur to answer or to decide. One point to be remembered is that the principal light should never be in the center of the picture. Observe that the pyramidal form of groupings may be carried out in a landscape as well as in figures, and that this form is almost sure to give an artistic composition provided one composes his picture according to the rules laid down by our masters of art.

BROMIDE PRINTS IN DIFFERENT COLORS

BROMIDE paper, which is a specially good medium for many prints and to be preferred to the rapid gaslight papers, may be toned after developing, and a number of different tones produced.

For a warm sepia the paper is toned or colored in a hypo-and-alum bath. Make up a stock solution after the following formula:

Hyposulphite of soda	5 ounces
Powdered alum	1 ounce
Granulated sugar	1 "
Water	35 ounces

Heat the water to boiling and dissolve the hypo, alum and sugar in it; pour into bottles and let it stand twenty-four hours. Drain off carefully, avoiding as much as possible the disturbing of the sediment at the bottom. To use, take two toning-trays, fill one with the cold solution, and the other with the bath heated to 150° F. or a little hotter. Leave the prints in the cold bath for five minutes, then transfer to the hot bath and let them remain until they have reached the desired tone. The temperature of the bath must be kept up to the degree mentioned, and this may be done by setting the tray in a larger tray and keeping them over a slow fire. After the print is toned rinse in an alum bath made of one ounce of alum to thirty-five of water, wash well and dry. The hypo bath for toning may be used repeatedly.

A beautiful reddish-brown may be obtained by stopping development as soon as the detail begins to appear in the shadows, and after the print is washed and fixed, and while still wet, first intensifying it and then toning it with uranium.

For the intensifier use one-half ounce nitrate of lead; three-fourths ounce of ferricyanide of potassium; twelve ounces of water. Leave the print in this bath till it turns yellow, then wash in running water, and when the image has turned white place it in a tray face up and flood with a solution made of one ounce nitrate of uranium, one ounce chloride of ammonia, and ten ounces of water.

Tones of rich chestnut-color may be obtained by using cupric chloride instead of uranium after the print has been treated with the lead bath. Make up a solution of cupric chloride, one ounce, water, ten ounces, and tone the print in this until

A. W. ENGEL — FIRST PRIZE — A WINDY DAY

it turns a chestnut-color. The whites of the paper absorb more or less of the coloring, so that the print looks as if made by some other process than that of photography.

Green tones on bromide prints may be obtained by immersing the print, after being treated in the lead bath, in a ten per cent solution of cobalt subchloride.

COMPOSITE PICTURES

A COMPOSITE photograph is a photograph of several persons taken one after the other on the same sensitive plate. A composite photograph is a very interesting study, and is often used to illustrate the type of a class; as, for instance, a number of scholars pursuing the same study are photographed one after another on the same plate and the resulting picture is supposed to bring out the prominent characteristic of the pupils. In the same way a club of athletes, a team of baseball or football players, the members of a golf club, etc., are photographed.

To make a composite picture the heads of the sitters must all be posed in one position and occupy the same place on the plate. A full-face view or a direct profile are the best positions for this kind of picture. To regulate the exposure, the time required for a correct exposure is divided by the number of sitters; for instance, if there are ten sitters, and the time of exposure is ten seconds, then one second each must be given to each sitter.

It is better to use a small stop, as if the plate is a little over-exposed it prevents fogging or hardness in the negative.

One can derive a great deal of amusement from a composite photograph. A picture of half a dozen young ladies taken with hats on gives a

most wonderful production in the way of a "composite" hat.

The children of one family make an interesting composite study. Sir Francis Galton, the man who originated this style of picture, thought that if such family pictures could be made every six months or a year the result, after a number of years, would make a most interesting study of the growth of a family type or characteristic.

AN INEXPENSIVE CASE FOR STORING NEGATIVES

THE stuff of which the case is made is one-inch pine. The dimensions are as follows: height of case, seven and one-half feet; width, seventeen inches; depth, nine inches. This case is divided by half-inch stuff into ten rows of pigeonholes, making thirty in all, each pigeonhole being nine inches high and four and three-fourths inches wide. At the top of the case are two shelves the height of the pigeonholes, but the space not divided, and these are convenient for printing-papers, etc. The case takes up but little room, as it stands in a corner, and my own case stands on the second top step of my back staircase, which, winding at the top, leaves ample space for the case without at all interfering with the passage up and down the stairs.

To protect the negatives from dust a curtain of denim is hung from the top and furnished with hooks and rings so that it may be drawn down tight and fastened in place if necessary.

At the side of the case are hooks from which are suspended the catalogues or indices of the negative. To prevent the straying of the index it is attached to a stout cord, which admits of consulting it freely, but prevents it being taken away from its proper place.

At the top of each pigeonhole is placed the numbers of the plates which it contains, thus: 1 to 50; 51 to 100; etc. One can see at a glance the location of a negative, and it is quite as easily returned to its place when not in use.

The whole cost of the case, including putting it in its place and securing it to the wall by stout screws, was only three dollars, and it has paid for itself many, many times over by its compactness, convenience and time-saving.

When one has a large collection of negatives it is a good plan to index them in three ways: by number, by subject and alphabetically. The negatives are first numbered in the order in which they were made, thus giving a sort of historical data of their appearance. They are then indexed by subjects, putting landscapes, marines, portraits, etc., by themselves, and then indexed alphabetically irrespective of subject.

Having these three indices, one is able to find a certain negative without delay. When making subject and alphabetical indices it is better to use books with indentations showing the locations of the letters. Only the name and number of the negative is written in the catalogue. Anything which one wishes to note about the negative is written on the envelope which contains it.

Monthly Competitions

Closing the last day of every month.

Address all prints for competition to PHOTO-ERA, *The Round Robin Guild Competition, 383 Boylston Street, Boston, Mass.*

PRIZES

First prize: Value $10.00.
Second prize: Value $5.00.
Third prize: Value $2.50.

Honorable Mention: In addition to the awards, the names of those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be published.

Prizes may be chosen by the winner, and will be awarded in books, magazines, enlargements, mounts, photographic materials or any article of a photographic or art nature which can be bought for the amount of the prize won.

RULES

1. These competitions are free and open to all photographers, whether or not subscribers to PHOTO-ERA.

2. As many prints as desired, in any medium, mounted or unmounted, may be entered, but they must represent the unaided work of the competitor.

3. The right is reserved to withhold from the competitions all prints not up to the PHOTO-ERA standard.

4. *A package of prints will not be considered eligible unless accompanied by return postage at the rate of one cent for each two ounces or fraction.*

5. *Each print entered must bear the maker's name, address, Guild number, the title of the picture and the name of the competition for which it is intended, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA. If suitable, they will be reproduced, full credit in each case being given to the maker.

SUBJECTS FOR COMPETITION

June —"Interiors, with Figures." Closes July 31.
July —"Landscapes." Closes August 31.
August —"Waterscapes." Closes September 30.
September —"Sunsets." Closes October 31.
October —"Windows and Doorways." Closes November 30.
November —"Genre Studies." Closes December 31.
December —"Home Portraiture." Closes January 31.
January —"Illustrated Poem." Closes February 28.
February —"Mountains." Closes March 31.
March —"Atmospheric Effects." Closes April 30.

W. H. PORTERFIELD — SECOND PRIZE — A WINDY DAY

April —"Decorative Photography." Closes May 31.
May —"Animals." Closes June 30.

AWARDS — A WINDY DAY

First prize: A. W. Engel.
Second prize: W. H. Porterfield.
Third prize: D. H. Brookins.
Honorable Mention: Mrs. W. S. Marsh, W. F. Kuehl, J. E. Sponagle, Maud S. Lee, Smith O. Morey.

THIN SKIES

It often happens that a negative of a desirable landscape subject has so thin a sky that it prints a deep gray, much to the detriment of the finished print. To hold back the printing of the sky and equalize the tones, a little sweet oil cut with a little turpentine and then *very*, very slightly tinged with chrome yellow and applied to the back of the plate will retard the printing of the sky. Make a small dabber of cotton put in a piece of cheese-cloth and tied tightly. Dip it in the oil and dab the glass side of the negative over the sky part as evenly as possible, then go over it a second time. The glass is still transparent, but the yellow tinge of the mixture gives just the right color-screen.

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Elizabeth Flint Wade, *321 Hudson Street, Buffalo, N. Y. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

Herbert V.— Doubtless the marks on the plates which were exposed and then stored for future development were due to their being placed backs against the films. In replacing exposed plates in a box, if you are careful not to let the fingers touch the film side and to place the plates film sides together as when they are packed, such marks will never appear.

Mrs. F. L. O.— A clearing-solution which will clear either a negative or positive from stains or the slight veiling which resembles fog is made of one-half ounce of chrome alum, one-half ounce of citric acid and ten ounces of water. Immerse the plate in the liquid and let it remain for some time. Some negatives take longer to clear than others. Wash well and dry.

D. H. BROOKINS THIRD PRIZE — A WINDY DAY

DAVID B. N.— No; an enlarging-camera is not a necessary adjunct for the making of enlargements. You will find in a recent number of PHOTO-ERA, in the Round Robin Guild Department, a description of a home-made apparatus which does as good work as the expensive enlarging-camera.

CELIA G.— A double-pose photograph is a photograph of one person represented twice on the same plate. For instance, the subject may be taken sitting, and then standing, giving the effect of a person standing by himself. One-half of the negative is exposed at a time. Devices to be attached to the camera may be bought for this sort of picture, or one may shield half of the plate, make the exposure and then shield the other half. They are really freak pictures, and only made as a diversion.

J. H. FENTON.— To obtain a soft picture the image is thrown slightly out of focus, the sharp focus being first obtained and then the lens turned either forward or backward just far enough to have the lines blend without becoming too indistinct. This style of picture is for most things far more artistic than those in which a sharp, hard focus is used.

A. F. T.— The new circulars of the Guild will be out very soon, and copies will be sent to all the members of the Guild. They contain all detail in regard to prize competitions, rules of Guild membership, etc.

KATE R.— You can utilize your spoiled plates by making of them blue transparencies. The gelatine with which they are coated is first freed from the blackened silver, and then immersed in a sensitizing-solution such as is used for blueprints. A formula giving full detail has already appeared in PHOTO-ERA. Enclose twenty-five cents to the office and the magazine will be sent to you.

DELOS C.— Use tinted papers for decorative photography. These you can sensitize yourself according to formulas already published in this department of PHOTO-ERA. They are specially good in decorative flower-studies.

S. L. H. — A restrainer is a chemical which checks the rapid action of a developer. Bromide of potassium or ammonium are the two restrainers most commonly used. Plain water — that is, a diluted developer — will retard the action of the ingredients and bring out a fairly good negative from a much over-exposed plate.

ELLEN K.— Scour the diaphragms well, then place in a solution made of equal parts of copper nitrate and silver nitrate — a forty per cent solution. Let them remain in this solution for ten or fifteen minutes; then dry them in a hot oven, leaving them until they are well blackened.

CARLOS F.— Our new circulars will be issued this month, and will be forwarded to all members of the Round Robin Guild. Many of the illustrated papers purchase photographs of outsiders, though most of the large dailies and weeklies have a photographer on their staff. However, if you have negatives of unusual subjects you will find no trouble in disposing of prints from them. Try some of the magazines.

S. L. L.— Sulphite of soda is used for blackening negatives that have been bleached by bichloride of mercury in the intensifying process. It is also added to alkali developers as a preservative.

B. N. M.— See Round Robin Guild for June, 1903, for directions for salting paper. You can buy paper freshly salted of any dealer in photographic supplies.

DELIA C.— We have already given several articles on money-making with the camera. Our space for correspondents will not allow of an answer in detail, but if you will write and state just how well fitted you are to use a camera, and your special bent in the practice of the art of photography, the editor would be glad to advise you by mail. You would find retouching a very trying work for the eyes, and it is not one that pays so very well unless one is a skilled worker and knows how to retouch without destroying the modeling.

SILVIO PAINI.— For a retouching-medium do not use a varnish, but roughen the film with finely powdered pumice-stone. Put a little of the powder on the negative and rub gently with the end of the finger in a rotary movement. This will roughen the film just enough to give a good "tooth" which takes the pencil well. After the plate is roughened brush off with a soft brush. The powder is applied locally to the places which need retouching. An excellent backing and one easily removed from plates is one ounce of lampblack, one ounce of powdered gum arabic, two ounces of glycerine and eight ounces of water. Brush it over the back of the plate with a wide, soft brush. I should recommend using non-halation plates instead of backing. You can buy a set of tinting-colors designed especially for the coloring of lantern-slides and prints. They are simple to use and very satisfactory in result. If you will send twenty-five cents to the office, a copy of the *Practical Photographer* giving full directions for making lantern-slides and transparencies, and also a special article on the coloring of slides, will be mailed to you.

BERTHA B.— Use one ounce balsam of fir and two ounces spirits of turpentine for a good medium for sealing your lens. Balsam of fir, if not too thick, may be used pure, but it is better to cut it with the turpentine.

Print Criticism

Address all prints for criticism, enclosing return postage at the rate of one cent for each two ounces or fraction thereof, to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing process.*

M. M. C.— Your post-cards submitted in the February competition might be improved technically. Aristo Gold cards should be printed a few shades darker than the desired tone, and should not be allowed to remain in the hypo-bath longer than twenty minutes. Therein, it would seem, lies the trouble with your cards; they have remained so long in the hypo-bath that they are considerably bleached.

ELLEN D.— Technically speaking, the print sent by you is from a good negative; but artistically speaking, the picture is a very poor one. The lines of clapboards running across a picture and forming a background for a figure-study is one of the most inartistic effects one could produce in the way of a background, but it is perhaps the most frequently seen, especially in the work of beginners.

ADA SPEAKMAN.— If you can do so, you would find it much to your advantage to take a course in art — not painting, but in the studying of art principles, learning what is meant by the terms used in art and then applying them to pictures. If you are clever with a pencil, a course of black-and-white work would give you wonderful help in the use of your camera in making what you have set out to do, artistic pictures, and of subjects that are worth while. The two prints which you enclose are very good, the one of the child being a specially pleasing study. The lighting of the face is rather harsh, and I would advise making another negative of the same subject and using a more subdued lighting.

BERTHA B.— The picture which you enclose has the horizon line directly across the middle of the picture. In this view you can spare a good inch off from the sky, and this will add ten per cent to the artistic value of your picture. The print will also bear trimming three-quarters of an inch at the left, thus bringing the tree, which is the tallest object in the view, away from the center of the picture.

B. S. A.— In using ammonium persulphate reducer it should be acid and freshly mixed. A stock solution may be made as follows: one-half ounce of ammonium persulphate, one ounce of sulphite of sodium, twenty-four minims of sulphuric acid, five ounces of water. To use, take one-half ounce of stock solution and five ounces of water. Keep bottle tightly corked. If used infrequently it is a wise plan to seal with paraffin wax.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

Conducted by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department Address all such communications to Phil M. Riley, 383 Boylston Street, Boston, Mass.

PICRIC ACID IN DEVELOPMENT

A FRENCH photographer, M. Mercier, in his recent work, "Conseils aux Amateurs," states that picric acid in the developer brings out more detail and produces better gradation and density. He recommends the following formula, and also states that the acid is inactive with developers other than hydroquinone or metol-hydro:

Hydroquinone	96 grains
Sodium sulphite	12 ounces
Potassium carbonate	2 "
Eosine	5 grains
Picric acid	10 "
Water to	20 ounces

DRYING BOTTLES

THE photographic worker frequently desires to dry the inside of a bottle quickly after it has been washed. Warming is not satisfactory, for vapor will collect when the bottle cools again, and alcohol for rinsing is too expensive. Probably the best method is to put a quantity of mustard-seed into the bottle and shake well. The seeds will in a short time absorb the moisture and leave the bottle clean and dry.

DRY-PLATES ON GREEN GLASS

MR. W. RIDDELL, Lynmouth, England, has successfully used dry-plates coated on green glass as a preventive of halation, says *Photography*. That plates so coated are absolutely non-halation seems to be proved by an interior photograph, published with Mr. Riddell's communication, including three windows, the exposure given being six seconds at f /22 on a sunny day. Mr. Riddell's contention is that light-rays could not possibly pass through green glass during exposure and therefore could not possibly be reflected back again into the emulsion and cause halation. Doubtless American plate-makers would prepare similar plates if requested to do so, and for interior work they seem to solve what has often been a difficult problem.

AN IMPROVISED GASLIGHT-PAPER

SINCE publishing a method of changing P. O. P. into gaslight paper in the April issue of PHOTO-ERA, the following formula has appeared in the *Photographische Rundschau:*

Potassium bromide	3 grammes
Potassium iodide	1 gramme
Water	1000 e. c.

Immerse the paper in this solution for five minutes, wash for five minutes, remove the excess of water with photographic blotting-paper and dry in the dark-room. Exposure, development and fixation is as usual with gaslight-paper.

BROWN TONES ON VELOX

IT is possible to secure excellent brown tones on Velox paper by the use of the following developer:

A

Pyro	30 grains
Potassium metabisulphite	30 "
Ammonium bromide	30 "
Water	10 ounces

B

Ammonia (.880)	75 minims
Water	10 ounces

For use, take one-half ounce each of A and B and one ounce of water, adding more of A and B as time goes on. It is advisable to develop by an orange glass, as the action of the solution is not very rapid.

POLISH FOR ALUMINUM

AN excellent polish for the aluminum fittings on cameras is prepared as follows:

Stearic acid	1 part
Fuller's earth	1 "
Tripoli	6 parts

A natural, pure white color may be imparted to the aluminum by dipping it into a strong solution of caustic soda or potash, and then into a bath composed of two parts nitric and one part sulphuric acid; from that into pure nitric acid, and finally into vinegar diluted with water. The metal parts should then be rinsed in running water and dried in hot sawdust, after which they may be burnished with a bloodstone burnisher.

A mixture of petrolatum and kerosene oil is an excellent application for protecting the surface of the metal.

PREPARING TRANSFER-PAPER

DRAWING or other paper may be readily prepared for use as transfer-paper in carbon-printing. Allow an ounce of soup-gelatine to swell in six ounces of cold water, and, when quite soft, stand the jar containing it in hot water to liquefy the gelatine. Next dissolve fifteen grains of chrome alum in an ounce of hot water and stir in. The mass has now become thick, and glacial acetic acid must be added little by little, while stirring, until the solution becomes sufficiently liquid for use. Pin the paper to a drawing-board and apply the solution with a soft brush, going first in one direction and then in the other, in order that the paper may be thoroughly covered. With a flat squeegee sweep off the surplus, which may be saved for use, and hang the paper up to dry. Transfer-paper prepared in this manner will keep any length of time, and may be prepared in quantities.

STAND DEVELOPMENT FOR UNDER-EXPOSURES

TIME or stand development is the most powerful weapon in the hands of the snap-shotter who habitually gets under-exposures. When I say "time development" I simply mean prolonged immersion of the plate in the developer — in a developer so compounded that it will work slowly and with evenness. The long and the short of it is, your developer must be very dilute. With developers such as glycin and rodinal, dosing with water leaves them as active as ever, in the sum of their work, but less active in the speed with which the work is done; and — to put the idea popularly, if not strictly accurately — the under-exposed parts of the plate have a better chance of catching up with the more exposed parts, if both of them are being coaxed out at a very gradual rate. In a word, slow development with a dilute developer gives you softer results than ordinary development with a full-strength developer. This might mean too great softness in a correct exposure; but too great softness is impossible with an under-exposure.

A time developing-tank ought to remain permanently on your shelf, so that when you reach what you know to be an under-exposed plate you can put it into the tank to build up its precious modicum of latent detail while you go on with your other work. But do not start developing an under-exposure with a full-strength developer, and then afterwards transfer it to the weak stuff in the tank. I know that one cherishes sneaking hopes that more detail in the laggard under-exposed parts may be enticed into visibility by this means. And the said details may appear. True; but meanwhile the high-lights have been clogged proportionately, which would not have happened had you put the dry-plate into the tank first of all. Time development should be time development all through — not a hybrid, half full-speed development, half prolonged development. If you know which of your plates are under-exposed, treat them patiently from the outset. If you do not know — well, then your case is hopeless.— *The Amateur Photographer, London.*

REDUCTION OF BLUE-PRINTS

THE density of an over-printed ferro-prussiate print may be removed by immersing it in a weak alkaline bath containing a few drops of strong ammonia to the ounce of water. After a short time the print should be transferred to a weak acid bath containing a few drops of hydrochloric acid to the ounce of water.

IN THE DARK-ROOM

I HAVE, since cold weather set in, found many places where the dark-rooms were so located that it was impossible to keep the solutions warm during development. The negatives would start in all right, but before they were one-third developed they would, through the developer growing colder, stand still and refuse to develop.

I have installed in many places a soapstone to be kept warm on the stove, which, when wanted in developing, could be placed on slats over the sink. In this way, the developing-dish could be warmed at any time, and, moreover, the soapstone would make an appreciable difference in the temperature of the dark-room.— *A Plate Demonstrator in the Aristo Eagle.*

SEPIA TONES ON PLATINUM PAPER

DR. P. JACOBY suggests the following developer for producing rich, warm sepia tones on black platinum paper:

Potassium oxalate	100 parts
Ammonium phosphate	25 "
Copper sulphate	1 part
Water	500 parts

The prints should remain at least five minutes in this bath, otherwise they lose considerable in the fixing-bath.

TONING OF P. O. P. WITH PLATINUM

THE following is an excellent formula for platinum toning of P. O. P.:

Potassium chloroplatinite	5 grains
Citric acid	40 "
Salt	40 "
Water	20 ounces

The operation is practically the same as toning in ordinary baths, except that the prints must be washed before toning and again before immersion in the fixing-bath, the strength of which is about two ounces of hypo to the pint of water.

PLATINUM IN THE YUKON

SOME space has recently been devoted, in a number of papers, to the fact that there is promise of a new source of platinum supply in the Yukon district. It is said that the black sand from the river-bed contains the precious metal in the form of fine grains.

A SAFE LIGHT FOR DEVELOPING ORTHOCHROMATIC PLATES

WITH proper care not to expose the plate too long or too near the developing-light, the ordinary ruby-lamp should be safe — except, of course, when using panchromatic or red-sensitive plates. A dark red which is quite safe for ordinary orthochromatic plates may be made of two ordinary dry-plates from which the silver has been fixed out. Stain one of them for ten minutes in a solution containing five per cent of methyl violet and one per cent of borax, and then set away without washing. Stain the other for five minutes in a one per cent solution of naphthol orange and rinse before drying. When dry bind the two together, film to film.

An English worker still further advises that a sheet of double-flashed chromium green glass to lay over the tray while a plate is developing gives additional safety. The reason for it is this: the red glass of the lamp absorbs all the colors except the red, orange and yellow, and the green absorbs the red, orange and a greater part of the yellow, so that the plate is almost in utter darkness.

MAXIMS FOR HANGING PICTURES

FORMAL or symmetrical arrangements are generally to be avoided.

Two pictures which are closely similar in subject, size or style of framing should not be hung side by side, nor one over the other.

As far as possible it is well to avoid having the tops and bottoms of a group of frames in the same horizontal line.

Similarly avoid the sides of two adjacent frames being in the same vertical line.

The interspaces between the frames should seldom be so nearly the same as to suggest an unsuccessful attempt to make them the same.

In general, small pictures and those inviting close inspection should not be "skied" or "floored." It is a common mistake to put the larger pictures "on the line" and the smaller ones above them.

When hanging pictures in a room, it is desirable to arrange as far as possible that the direction of lighting suggested by the picture agrees with the direction of light falling on the picture. Thus in a portrait with a light and a dark cheek, arrange so that the lighted side of the face is towards the window lighting the wall.

A picture with a high horizon (suggesting an elevated view-point) should not be hung along the line. But one with a low horizon may be so placed. The down-hill effect so seldom satisfactorily rendered cannot be properly appreciated unless the spectator's eye is well above the horizon of the picture. This matter of high or low horizons is almost universally ignored through ignorance of first principles of human vision.

Dark pictures should not be hung against a very light background or the gradations in their shadows will be upset by the light wall.

For room-decorative effect, the more varied the subject as one passes from frame to frame the better the effect. But it is not well to have too many different styles of mounting or framing together, as this produces a mottled, patchy, incoherent effect. The decorative design of a room or wall should have the same general harmonious suggestion that we seek for in a well-contrived single picture.— *R. Dale in The Practical Photographer.*

HOW TO PREVENT P. O. P. PRINTS FROM CURLING

FIRST of all, the extreme dryness of the film may be lessened by immersing the prints after washing, and just before drying, in a glycerine bath — about three drops to the ounce of water. Allow them to remain in this five or ten minutes before drying. Another method is to squeegee the prints to a ferrotype or prepared glass plate, producing a glossy surface, unless ground glass is used. A third method is to lay the prints on blotters, and, when nearly dry, roll them, film side outwards, around a pencil, the edge of each following on beneath the edge of the one before. They should be rolled tightly, wrapped in a paper and left until thoroughly dry, when they may be readily made to lie flat.

MAXIMS ABOUT MOUNTING

THE mount is made for the photograph, not the photograph for the mount.

Composition is of as much importance in the placing of the print on the mount as in the placing of the principal object in the picture. Even the size, design and whereabouts of the artist's signature must be considered in relation to the picture, its position on the mount, its color and its subject. In this connection the signatures of Japanese artists may be studied with profit. Their placing is often a small *tour de force* of composition in itself, and is as truly the result of study as the picture to which it is attached.

The signature must never be so obtrusive as to attract attention before it is looked for; nor so bizarre as to be illegible. Its tint must harmonize with that of the photograph, as well as with that of the mount.

The careful worker will never accept mounts cut to a uniform size. Every mount should be cut for the particular picture it is intended to support. When paper mounts are used the easiest and best plan is to trim them only after the photograph has been affixed.

The novice cannot do better than stick to greens and browns in his mounts. Photography is a monochrome art, and photographers would do wisely to remember the fact when selecting tinted supports for their productions.

Smooth-surfaced prints should not be placed against very rough-surfaced mounts, nor vice versa. The lightness of a print may be accentuated by a very dark mount, and vice versa, but this must not be carried too far, or a jarring note will be struck.

The mount which attracts attention before the print — even by its beauty — is a failure.

Ornamentations on the mount are to be avoided, unless the photographer be a sufficiently skilled artist to design and execute them himself, and in that case he must still bear in mind the fact that the print is the main thing and the ornamentations are subordinate.

Broadly speaking, the only ornamentations a photograph should require are the mount itself and the worker's signature.

While prints may often with advantage be put nearer the top of the mount than the bottom, few, if any, pictures can bear being put nearer the bottom than the top.

The mount should never be very markedly different in shape from the print. Thus a narrow "panel" upright print may not be placed on a quite square or oblong mount.

Avoid incongruities. A print on very stout paper should not be attached to a mount of very flimsy paper. The incongruities of "similarity" are equally bad; thus, a brown print on a brown mount of almost the same shade, so that it is difficult to distinguish where the print ends and its support begins.

Anything in the mount which arouses curiosity is bad, though this is not necessarily a defect in the print.— *Ward Muir in The Practical Photographer.*

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

OUR SPECIAL PICTORIAL INSERT

THE special pictorial insert in color, which begins with the current issue of PHOTO-ERA, will be a regular bi-monthly feature of this magazine. The next subject will be "The Wave," exhibited in the Third American Photographic Salon, by J. R. Peterson, an eminent pictorialist and member of the Portland Camera Club.

A CHANGE IN PHOTOGRAPHIC JOURNALISM

OUR genial and active cotemporary, Mr. F. Dundas Todd, founder, editor and publisher of the *Photo-Beacon*, has at last succumbed to a long-cherished desire to devote his remaining years to agricultural pursuits. He has, therefore, disposed of his periodical and exposure-tables to the publishers of the *American Amateur Photographer* and *Camera and Dark-Room*, agreeing to contribute to the pages of the latter magazine editorial articles each month for a stipulated period. This is well, for the pain of parting is, in a measure, alleviated by our being permitted to enjoy, as of yore, the sparkling dissertations on current photographic events from the pen of our erudite and amiable friend, the only F. Dundas Todd.

WYOMING VALLEY CAMERA CLUB

THE sixth annual exhibition by this society took place at Wilkes Barre, May 8, 9, 10 and 11, and, all in all, must be recorded as an event of exceptional importance. It was planned and carried out on novel and progressive lines, and in this respect it set an example worthy of emulation by other photographic societies. The jury, than which none better could have been selected, consisted of the following-named authorities: Arthur W. Dow, art director, Columbia University; Sir Caspar Purdon Clarke, director of the Metropolitan Museum of Art; Alvin Langdon Coburn, photographer; Edward Penfield, art staff, *Harper's* and William H. Walker, art staff, *Life*. These judges personally inspected all the entries, dividing those which they accepted into four groups, *a*, *b*, *c* and *d*, according to the order of merit. From these was chosen the cream and classified as "Special Mention," which comprised the following pictures: Portrait-Class — I. "Portrait," Kenneth Alexander; II. "Baby John," Burton Stanley Ruger; III. "Little Jackie Horner," Misses W. and G. Parrish; Honorable Mention, IV. "Sewing," C. F. Clarke. Figure Class — I. "A Rainy Day," D. H. Brookins; II. Illustration of "Rubaiyat," No. 5, Adelaide Hanscom; III. "From Ship to Dock House," A. W. Engel; Honorable Mention, IV. Illustration of "Rubaiyat," No. 2, Adelaide Hanscom. Landscape Class — I. "The Crossing, Venice," Wm. H. Phillips; II. "In Turkish Waters," Wm. H. Phillips; III. "The Toiler's Highway," J. G. Ruggles; Honorable Mention, IV. "Study in Snow Textures," Lee Russell. The remaining prints, numbering 279, were by workers of greater or less repute. Here is the list complete, — George Alexander, Chas. K. Archer, Wm. Armbruster, Ethel M. Barrows, W. D. Brodhun, D. H. Brookins, Geo. Buttler, John Canuteson, Carl W. Christiansen, W. A. Clark, C. F. Clarke, C. P. Cole, Flora M. Colman, C. Edwin Cook, H. R. Cummings, A. M. Curry, Dwight A. Davis, Jane Dudley, W. H. Edwards, Geo. C. Elmberger, A. W. Engel, W. H. Evans, A. L. Fitch, S. H. Gilbert, E. E. Gray, Adelaide Hanscom, O. C. Hillard, J. T. Jennings, A. F. Jobke, F. C. Johnson, Adam Kraft, W. C. Kaiser, R. S. Kaufman, Wm. T. Knox, Geo. J. Lane, B. F. Langland, G. W. Leach, Jr., Robt. L. Litch, Lewis Lloyd, C. N. Loveland, Beatrice Marquis, Harry Maxted, W. A. McAllister, B. J. Morris, Frederick L. Padgett, Misses W. and G. Parrish, H. V. Pettibone, Wm. H. Phillips, H. T. Quin, Jas. L. Radcliffe, Robert Rhone, Burton Stanley Ruger, Lee Russell, J. G. Ruggles, Edward F. Ryman, A. P. Salyer, H. M. Seitzinger, John W. Schuler, Clinton J. Spencer, R. W. Taft, Chas. Tracy, C. O. Thurston, F. M. Tuckerman, R. L. Wadhams, H. F. Walbridge, R. E. Weeks, G. Whitehouse, Paul Wierum, Fanny Williams and Wm. H. Zerbe. The success of this brilliant affair is largely due to the instrumentality and untiring effort of Edward F. Ryman, of the Wilkes Barre Camera Club.

HARTFORD CAMERA CLUB

THE twenty-third annual exhibition of this flourishing society was held May 17-20, the occasion being marked by unusual brilliancy and enthusiasm. Although the display of prints was not so large as that of last year, the pictorial standard was higher and the interest correspondingly greater. The jury, consisting of Clarissa Hovey, of Boston, and C. Louise Williams, of Hartford, made the following awards: Animals — "Going Home," Jenny S. Walkley; Honorable Mention, "An Old Guard," W. H. Thompson. Figure Studies — first prize, "Mistress Harriet," W. H. Thompson. Flowers — first prize, "Iris," Eugene D. Field; second prize, "Pride of the Garden," Henry S. Redfield. Genre — first prize, "Toil Most O'er," Leo Burnham; second prize, "An Artist at Work," Henry S. Redfield. Landscapes —

first prize, "The Base of the Sand Dune," Eugene D. Field; second prize, "The Old Cedar," Herbert O. Warner. Marines — first prize, "In the Fog," Eugene D. Field. Portraits — first prize, "A Portrait," Frederick S. Crossfield; second prize, "A Portrait," Henry S. Redfield. Snow Scenes — first prize, "Winter Contrasts," Eugene D. Field; second prize, "A Winter Afternoon," Clayton P. Chamberlain. The club enjoys a membership of one hundred workers.

DECENNIAL CONVENTION OF THE PHOTOGRAPHERS' ASSOCIATION OF NEW ENGLAND

THE approaching annual reunion of the largest photographic body this side of New York will also be the tenth anniversary of its existence. Its able corps of officials will strive to make the affair one of unprecedented success. To this end it announces the following grand prizes: a solid gold medal to the successful winner in the Grand Portrait Class, prints 8 x 10 or larger, *open to all the world;* three prizes, portrait class; three prizes, genre class, and three prizes, landscape class — confined to association members. The secretary, George H. Hastings, states that there will be a series of lectures, demonstrations and entertainments of an unusually brilliant character, in anticipation of which a full attendance of members from all sections of New England is assured. This festival-convention will take place at Mechanics Building, Boston, August 27, 28 and 29. It is sincerely hoped that amateur workers will appreciate the rare opportunity afforded to compete with professionals for a gold medal.

PHOTO-SECESSION

THE third series of exhibitions held at the Little Galleries of the Photo-Secession will be opened in November, with the Annual Members' Exhibition. Every member is entitled to be represented by one print, at least. Prints should preferably not be framed, but mounted on 14 x 22 mounts. All prints intended for this exhibition should be sent *express prepaid* or *by mail* to : Photo-Secession, 291 Fifth Ave., New York City; or Alfred Stieglitz, care of Geo. F. Of, 3 East 28th St., New York City. Exhibitions of foreign and domestic pictures, not necessarily photographic, will follow.

PHOTOGRAPHERS OF MEN

IT is a singular coincidence that the two American photographers who have engaged public attention to an uncommon degree of late — Pirie MacDonald and Alvin Langdon Coburn — seem to manifest a decided preference for the features of the sterner sex. The former boldly announces himself as a "Photographer of Men;" that is his one specialty. The latter's collection of notabilities, as seen in New York and Boston, was confined to men. As Mr. Coburn has exercised his talent for portraiture in London and on the continent, it is a pity that he did not include among his trophies the presentments of such gifted women as Sarah Bernhardt, Cecile Chaminade, Eleonora Duse, Lady Butler and Ellen Terry — subjects surely worthy of his skill. Perhaps the young pictorialist is wise, believing that caution is the better part of valor. Who knows how many times he has not said to himself: "To retouch or not to retouch, that is the question." He has, evidently, decided not to retouch.

Of Mr. MacDonald's exceptional powers to portray human character, PHOTO-ERA will give its readers ample proof in the August issue, in the form of an illustrated article by Sidney Allan on the subject of psychology in portraiture.

THE PHOTOGRAPHERS' ASSOCIATION OF WISCONSIN

THE officers of the Photographers' Association of Wisconsin are to be congratulated upon the success of the eleventh annual convention of that organization, which was held in the Masonic Building, Milwaukee, from April 23 to 25 inclusive. To the officers is due a large share of the success of any convention, and it is, therefore, high praise to state that this last meeting was the banner convention of the Association and that the report of the treasurer shows it to be in excellent financial condition. A fine program was prepared for each day, including demonstrations by H. A. Collings, C. H. Wells, H. E. Smith and L. W. Brown. Addresses of interest and great practical value were also given by W. A. Pryor, A. A. Bish, H. E. Smith, C. W. Neiswanger, W. J. Hillman, Geo. J. Parrott, B. J. Brown and J. M. Bandtel. The exhibition of pictures was of unusual merit, the prizes being as follows:

Class A — first award, D. D. O'Brien, of Waukesha; second award, Rembrandt Studio, Ocanto. Class B — first award, J. H. Field, Berlin; second award, F. R. Poe, Oconomowoc. The Werner Trophy was awarded to B. A. Rice, of Milwaukee, while the Rice Trophy went to H. J. Leonard, of Racine. A collection of six landscapes by J. H. Field was given a blue ribbon and designated as the best exhibit in the Convention. A print, "Cowboy," by B. A. Rice, was selected for the Association Salon, and four pictures, including the one just mentioned, were selected by Messrs. Neiswanger and Parrott to be hung in the Degarre Studio as a loan exhibit, and these are to be in competition for the D. M. I. Diamond Medal. The other three pictures were, "Picking Flowers," by J. H. Field; "Lady Violinist," by H. J. Leonard; and a silhouette picture of a boy playing with a toy engine, by Eb. Harwood.

The next convention will again be held at Milwaukee, and the officers are as follows: president, W. A. Pryor; first vice-president, W. J. Willman; second vice-president, L. P. Clapp; secretary, J. M. Bandtel; treasurer, A. A. Bish.

THE ITALIAN LAKES, by W. D. McCrackan. Library 12mo, cloth, illustrated, $2.00. L. C. Page & Co., Boston.

Among the three hundred thousand American travelers, with whom Europe is now beginning to be alive, there are comparatively few who will not indulge in a visit, however brief, to the Italian Lakes, a region justly regarded as a veritable prodigy of natural loveliness. Whole libraries have been written, picturing the wondrous scenic and climatic charms of this, the garden-spot of Europe. Most of the publications on this enchanting subject are *de luxe* editions, large and gorgeously illustrated; but few even of these convey information in so fluent, succinct and attractive a manner as the admirable volume by W. D. McCrackan, the well-known lecturer and traveler. He has a successful way of acquainting his readers with the matchless beauties of these azure waters, and introducing, opportunely, references to historical personages who have been attracted thither from time immemorial.

A perusal of this story of Lago Maggiore and its sister lakes is an ideal preparation for the tourist, and of absorbing interest, whether he visits the locality for the first or the tenth time. On no account, however, should the traveler neglect to be provided with a camera, it matters not how simple a one, as the wealth of artistic material presented by the Italian Lakes is truly inexhaustible. Mr. McCrackan's book is richly illustrated with photographs of his own taking.

STUDIES IN PICTURES, by John C. Van Dyke. 12mo, cloth, $1.50. Illustrated. Charles Scribner's Sons, New York.

A new book by so distinguished an authority on art-matters as our own J. C. Van Dyke is always hailed with enthusiasm, and justly so. His latest work, the result of earnest and fearless investigation in the art-centers of Europe, deals with the causes of the present deplorable condition of pictures by some of the old masters, and the author expresses himself with a directness and a vigor that are convincing. His opinion regarding the authenticity of many well-known pictures is equally instructive, and of inestimable value to the art-student. The photographer who cultivates a gloomy, shadowy style in portraiture, in the belief that the old masters recognized only the extremes of chiaroscuro-painting without regard for tonal gradations — will have to think a bit, for Mr. Van Dyke tells him in plain English that they did n't do any such a thing, and gives the reason for the blackened appearance of so many well-known paintings.

The chapters on figure, portrait and genre painting are illuminating in the highest degree. The progressive portrait-photographer, for instance, will read with decided profit a learned art-critic's views on the psychology in portraiture. The illustrations are not chosen perfunctorily, but emphasize brilliantly the strong points made by the author. The volume is a brainy, original product of one of the highest of living art-authorities and a copy should be owned by every earnest picture-lover — the photographer most of all. As an aid to the intelligent appreciation of great painters and their methods, Mr. Van Dyke's latest book is indispensable.

DIE BILDNIS-PHOTOGRAPHIE (Photo-Portraiture). Second, enlarged edition. Edited by Fritz Loescher. Quarto; profusely illustrated. Gustav Schmidt, Berlin, Germany.

In view of the paucity of successful portraitists among amateur workers in this country, it is a pleasure to announce the publication of a work which we sincerely regard as a positive boon to the earnest and ambitious worker in the most difficult department of photography — portraiture. Recognizing the numerous difficulties the student encounters and the needs of rigorous enlightenment, especially in consideration of the many abominations that are constantly being perpetrated under the guise of "portraits," Mr. Loescher — associate editor of the *Photographische Mittheilungen* and a high photographic authority — treats the matter in a most intelligent, lucid and convincing manner. He probably has heard of the person whose young daughter had been photographed by an amateur. Examining the home-portrait of his only child and then unceremoniously throwing it into the fire, the parent exclaimed angrily: "I consider a thing like that a libel. Instead of reproducing her good traits, that fellow has put in her face what is disagreeable and untrue. Besides, no one would recognize her by that print. If he tries it again, I'll teach him a lesson he'll not soon forget!" As we have stated, time and time again, there exists a lamentable amount of ignorance among amateur workers — we have no concern with the professional portrait-mills — many of whom appear satisfied with their primitive attempts, nor do they seem to know how to progress, even if inclined to. Mr. Loescher devotes a chapter to the conventional portrait, explaining its absurdity and incongruities, and fortifying his statements with copious illustrations. His treatment of the "New Portraiture" is a thorough and masterly exposition of that subject, and enhanced by an immense number of large, well-executed half-tones, illustrating the artistic skill of the world's leading portraitists. Here he shows his breadth of vision by drawing alike from the work of American, English, French and German practitioners. In dealing with the necessary apparatus, Mr. Loescher again displays a broad-minded spirit, by specifying the best types of portrait-lenses with intelligent discrimination and a total absence of bias, worthy, indeed, of all praise In his chapters on practical portraiture, he demonstrates, with the aid of lucid examples, how every conceivable difficulty in home and *al fresco* portraiture may be overcome successfully. Every worker, be he a student or accomplished prize-winner, should familiarize himself with the contents of Mr. Loescher's work.

DIE KUENSTLERISCHEN GRUNDSAETZE UND DEREN ABLEITUNGEN UND ANWENDUNG, by C. Baumann. Quarto. Price, 5 Marks. Wilhelm Knapp, Halle a. S., Germany.

Among the contributions to photographic literature the Germans occupy an honorable place, as attested by the published works of such accomplished investigators as Herrmann Vogel, J. Gaedicke, J. M. Eder, Adolph Miethe and others. But in the æsthetic considerations of the art very little activity has been manifested in that quarter. The reason for this is attributable to the notoriously narrow limits within which German photographers, like their brothers in other civilized countries, labored, ever since the art was derived from the country beyond the Rhine. But even during this long period of conventional portraiture, Germany — together with Austria — enjoyed the distinction of being universally regarded (except, of course, by the ever-prejudiced English photographer) as the leader in beauty and technical perfection of photographic portraiture. This was the era of such distinguished photographers as Angerer, Hanfstaengl, Schaarwaechter, Loescher & Petsch, Luckhardt and Loewy. This company of finely-sensed artists flourished about thirty years ago and, strangely enough, the successors to their famous studios are notoriously deficient in artistic and technical ability. Then followed a period absolutely barren of artistic ideas, until the dawn of the New Photography, several years ago. Recognizing the originality and the distinctiveness of the new school, not a mere *renaissance*, but an awakening to a higher, more truthful mode of expression — far in advance of what the most ardent admirers of the art ever imagined — writers on art stirred in sympathy and began to encourage the artists in an original field with helpful words, expressed after critical considerations of the merits of up-to-date photographic achievements. In his treatise Mr. Baumann, appreciating the endeavors of aspiring pictorialists, cheerfully comes to their assistance, leading the way to a clear and practical understanding of the principles of light, color, harmony, as they manifest themselves in nature. He lifts the veil of mystery that envelops nature's secrets and points out the way to a successful solution of the problems that confront the youthful pictorialist. Recognizing the value of Mr. Baumann's book to the earnest, thoughtful student of nature's pictorial wealth, the Editor of PHOTO-ERA has translated the chapter which treats on the judicious selection of the chief point of interest in a picture, in this instance a landscape, which will appear in the August issue of this magazine.

PHOTOGRAPHY OF BIRDS AND FLOWERS.

This interesting branch of photography is considerably enhanced by means of the handy, illustrated pocket-guides published by Charles K. Reed, Worcester, Mass. Two of these miniature text-books are devoted to birds, shown in color and one to flowers (200 varieties). Price, 50 cents each; in flexible leather, 75 cents, postpaid.

ART PRINCIPLES IN PORTRAIT-PHOTOGRAPHY — COMPOSITION, TREATMENT OF BACKGROUNDS AND THE PROCESSES INVOLVED IN MANIPULATING THE PLATE, by Otto Walter Beck, Instructor in Pictorial Composition, Pratt's Institute. 12mo, illustrated, cloth, $3.00, net. The Baker & Taylor Co., New York.

At last! We have waited these many years for a book in cordial sympathy with the art-aspirant in photography, and one capable of showing him an easy solution of the perplexing problems that he continuously has to face. Mr. Beck appreciates the fact that, enslaved by commercialism and bonds of custom, plain photography has run into a lifeless groove. A realism has been established that tends to preclude that nourishment and refreshing mental influence found in suggestion and in the creative powers resulting in beauty. Art in photography is possible only in the extension of methods already known and in the employment of new processes to effect a manipulation of the photo-image. When the tool is made so pliable that it records more than the surface appearance of things, when the personal element enters to give life to the accurate, literal records, the present limitations of impersonal representation are removed from photography, and its large, true influence opens. In spite of the attainment of much admirable creative work — due to the modifications of lens-records — picture unity and picture expression have rarely been reached. Creative work in photography may be produced by certain other factors; notably, intelligent manipulation on the negative, judicious control of light-and-shade effects and skilful management of the character of lines. Mr. Beck further considers the correct relation of the background to the figure, the theory of spacings, the *bête noire* of the art critic — disfiguring white spots, and the dignified, harmonious arrangement of the figure. In conclusion, the author explains how the character of the negative-film may be changed — improved by mechanical manipulation of brush and knife. Happy, indeed, the worker who shall own a copy of Mr. Beck's practicable volume, assuredly one of the most important contributions to photographic literature.

DEUTSCHER PHOTOGRAPHEN — KALENDER, TASCHENBUCH UND ALMANACH FUER 1907. K. Schwier, Weimar, Germany. Price, two Marks (50 cents).

A pocket edition of a German annual containing a complete list of photographic societies in the fatherland and Austro-Hungary — professional and amateur — the membership of each being given in detail. There is also a comprehensive list of photo-manufacturers and dealers, arranged alphabetically and according to cities; photo-societies in foreign countries, institutions for photographic instruction and public dark-rooms in Germany and Austro-Hungary, and photographic periodicals throughout the world. The usefulness of this little

volume to the profession in general is apparent. One learns by consulting its pages, for instance, that the city of Berlin has five photographic clubs, with a total active membership of nearly 1,300. What do our photographic centers say to this?

INTERNATIONAL PHOTOGRAPHIC ART AND PICTURE POST-CARD SHOW

ALL of the great departments of craft and commerce, save the photographic arts, have had successful exhibitions, in which their development and progress have been shown. Never in America has a comprehensive and full exhibition of the best processes and products of photography been made. As soon as the management made the first announcement of such an exhibition, it was greeted with high endorsement from the greatest photographic artists in this country and abroad. This desired object will, however, be achieved by the above-named show, to be held at the First Regiment Armory, Chicago, from August 10 to 17.

This date will enable those attending the Convention at Dayton, O., to take advantage of this show, as a special train will be arranged for this purpose. Arrangements will be made as far as possible with the various railroad companies for excursion-rates from all parts of the country.

It is the intention to make this show cover all departments and lines of photography. In addition to the trade exhibitions proper, there will be special sections devoted to each line of photography, professional and amateur.

The management is, from correspondence and promises of support received, fully satisfied that this show will, from the number of applications for space already received, in every way surpass in extent and variety any artistic display yet made. The committees are maturing their plans well in advance, in order that all branches of the craft may be adequately represented, and the Advisory Board is open to receive suggestions likely to add to the attractiveness of the exhibit as a whole.

Intending exhibitors will greatly assist us in making arrangements for this exhibition by informing us as early as possible of their probable requirements, as from present indications space will be limited. The price for space is one dollar per square foot. Arrangements can be made in contracts for the use of booths, already constructed. Write at once for plans, etc.

Gold, Silver, and Bronze Medals, together with Diplomas of Merit, will be awarded in each section and classification. The great Amateur Exhibition, in which is offered $100 in gold as first prize, $50 in gold as second prize, and $25 in gold as third prize, will be a wonderfully interesting display.

The Picture Post-Card Section, in which will be exhibited the collections and samples — both trade and amateur — will constitute one of the greatest displays of picture post-cards ever assembled in one place.

In the Amateur Section, $100 in gold, $50 in gold, $25 in gold, is offered as first, second and third prize for first, second and third best collection of post-cards exhibited.

Mr. Van Deventer, president of the Photographers' Association of America, will occupy the position of chairman of the Advisory Board; Mr. I. W. Taber, the position of vice-chairman; and the list of influential patrons, as well as the Advisory Board of one hundred and fifty members, is one of the most representative ever nominated.

Committee on Commercial Art and Picture Post-Card Exhibits: J. Ellsworth Gross, chairman.

Committee on Portrait Photography and Exhibits: Wm. B. Dyer, chairman; James Arthur, vice-chairman.

Committee on Genre Photographic Art and Exhibits: George E. Tingley, chairman.

Committee on International Photographic Arts and Picture Post-Card Exhibits: A. Langfrer, chairman.

Plans, entry forms, and all particulars may be had of, and all communications are requested to be addressed to, Henry Walter T. Tiernan, George Stuart Hill, John De P. Hilton, Organizing Managers. Organization Offices: 3600 Michigan Boulevard, Chicago, U. S. A.

ASSOCIATION OF MANUFACTURERS OF PARIS

ONE of the important photographic bodies of France is the Association of Manufacturers and Dealers of Photographic Materials. We are informed that the officers for the year 1907 are as follows: president, Charles Mendel; vice-president, Mr. Grieshaber; secretary, M. Maugenest; president of the Section of Dealers, M. Dalmais; secretary, Louis Schrambach; corresponding secretary, M. Korsten; treasurer, M. Boespflug; librarian, M. Duplonich; recording secretary, M. Daynes.

CONVENTION OF GERMAN WORKERS

THE German Photographers' Union is to hold its Thirty-sixth Annual Meeting this year, in Bremen, August 26 to 30, in conjunction with the Bremen Union of Professional Photographers and the Bremen Photographic Society. Mayor Marcus will preside. The sittings of the union and the exhibition will be held at the rooms of the "Parkhaus."

The North German Lloyd has extended its well-known hospitality to members, inviting them to visit the works of the Bremerhaven docks and harbor as well as the express-steamer *Kronprinzessin Cecilie*, August 29, and afterwards to go as far as Potesand Lighthouse on board the steamer *Vorwaerts*, at the same time enjoying an entertainment to be offered by the Lloyds.

Persons interested in either the meeting or the exhibition will receive detailed information by applying to the president of the Local Committee, Mr. Willy Dose, photographer, am Wall 117, Bremen, or to the president of the German Photographers' Union, Mr. Karl Schwire, at Weimar.

AMERICAN FEDERATION OF PHOTOGRAPHIC SOCIETIES

FROM the headquarters of the Federation at 1120 Wood St., Wilkinsburg, Penn., we have received an announcement and entry blank of the Fourth American Photographic Salon, which will be held at the principal American cities during 1907 and 1908. The announcement appears earlier this year than in the past, and the closing date for entries has been correspondingly advanced. This is necessitated by the fact that new clubs are coming into the Federation and the circuit will be longer than heretofore. From present indications, the Fourth Salon will surpass all others, as nearly one thousand new names have been added to the mailing-list.

For the benefit of PHOTO-ERA readers, who we hope will do their utmost to promote the success of this coming exhibition, we reprint the substance of the announcement, including the list of officers and committees, the conditions of entry and directions for forwarding same:

Officers of Federation — President, R. L. Sleeth, Jr.; first vice-president, William T. Knox; second vice-president, Chas. E. Fairman; secretary, Waldo E. Strayer; treasurer, William H. Phillips; salon director, Louis Fleckenstein; historian, Daniel Baker.

The Preliminary Jury — Photographers, William H. Zerbe, chairman; William T. Knox, Frank G. Wood, Dwight A. Davis, William H. Phillips, John Chislett, H. W. Minns, Winfield Scott Clime, R. E. Weeks, D. H. Brookins, R. L. Wadhams, R. L. Sleeth, Jr.

The Final Jury — Painters, not yet chosen.

Salon Committee — Louis Fleckenstein, director; Waldo E. Strayer, William H. Phillips, C. F. Potter, Jr., F. Dundas Todd, S. C. Bullencamp, William H. Zerbe, E. G. Fountain, George W. Beatty, C. C. Taylor, H. M. Seitzsinger, A. Doerflinger, Fayette J. Clute, R. E. Weeks, John Chislett, J. H. Field, R. L. Sleeth, Jr.

Foreign Relations Committee — Louis Fleckenstein, chairman, Faribault, Minn.; Carl Rau, Louis A. Lamb, Mrs. E. W. Willard, Fedora E. D. Brown, Mrs. Sara W. Holm, Mrs. W. W. Pearce, William H. Zerbe, Wendell G. Corthell.

Membership Committee — Waldo E. Strayer, chairman; F. M. Tuckerman, C. F. Potter, Jr., John Chislett, C. C. Taylor, H. M. Seitzsinger, George B. Goodwin.

Printing and Publicity — Waldo E. Strayer, chairman; William H. Phillips, R. L. Sleeth, Jr.

FORWARDING ENTRIES.

Entries may be forwarded to any of the following addresses: Fayette J. Clute, care Camera Craft, San Francisco, Cal.; Louis Fleckenstein, Faribault, Minn.; George B. Goodwin, Wisconsin Camera Club, Milwaukee, Wis.; R. E. Weeks, Chicago Camera Club, Chicago, Ill.; C. C. Taylor, Toledo Camera Club, Toledo, O.; E. G. Fountain, 203 Chamber of Commerce, Cleveland, O.; William H. Zerbe, 345 Spruce St., Richmond Hill, L. I., N. Y., or direct to The Pen, Pencil and Camera Club, 1120 Wood St., Wilkinsburg, Penn.

American entries MUST BE framed or glazed. Failure to comply with this condition will prevent pictures from being submitted to the juries.

FOREIGN ENTRIES.

To be sent mounted or unmounted, but NOT framed.

Entries from Great Britain should be sent to arrive by Aug. 15, 1907, to H. Snowden Ward, 6 Farringdon Ave., London, E. C., England, and should be marked "For American Photographic Salon."

Entries from Italy, to Alfredo Ornano, 21 Via Caffaro, Genoa, Italy, to arrive in his hands by Aug. 15, 1907, and should be marked "For American Photographic Salon."

Entries from Norway, Sweden and Denmark, to Copenhagen (Denmark) Camera Club, before Aug. 15, 1907, and should be marked "For American Photographic Salon."

Entries from Australia to A. Hill Griffiths, 66 King St., Sydney, N. S. W., to arrive in his hands by Aug. 1, 1907, and should be marked "For American Photographic Salon."

Entries from all other countries should be sent direct to The Pen, Pencil and Camera Club, 1120 Wood St., Wilkinsburg, Penn., U. S. A., marked "For American Photographic Salon, in bond to Pittsburg," and should arrive in Pittsburg Custom House by Sept. 1, 1907.

Accepted foreign entries will be framed at the expense of the Federation.

CONDITIONS.

1. Entries must be in the hands of the Pen, Pencil and Camera Club, 1120 Wood St., Wilkinsburg, Penn., U. S. A., by noon of Sept. 15, 1907.

2. There will be no invited work. All prints will be submitted to the preliminary jury.

3. No work entered for former American Salons will be eligible.

4. Entries must be suitably framed or glazed, and the title, WITH NAME AND ADDRESS OF ENTRANT, plainly written on back of each — except in case of foreign contributors.

5. A list of titles must be sent separately by mail, giving name and address of sender, price of each if for sale, and special instructions, if any. This list should be in the hands of the secretary a few days before the closing of entries.

6. All work, mounting and framing excepted, must be done by entrant. Sign names of collaborators.

7. Pictures will be returned as soon as practicable after the close of the exhibition.

8. Each contributor must pay the expense of transportation to and from the exhibition.

9. A commission of fifteen per cent will be charged upon each sale by the various clubs holding the Salon.

WHETHER you are photographing a bunch of fish after a day's successful catch, or a line of sun-burned campers, or the deep and silent woods, if you have the **Bausch & Lomb-Zeiss Tessar Lens** in your camera, you know that you have the means at hand to get results—speed, definition, brilliance, all those qualities that give a photograph character and life and beauty.

¶ Send for our lens catalog. It is an interesting and valuable book. It's free.

Bausch & Lomb Optical Company, Rochester, N. Y.
New York Boston Washington Chicago San Francisco

3 A Graflex Camera

¶ A new camera of the reflecting type, which takes standard, daylight-loading roll film, no extra attachments being required.
¶ Like the regular Auto Graflex, the focusing screen shows the object to be photographed full size of plate and right-side up at the instant of exposure.

¶ The Graflex Focal Plane Shutter, which works at any speed from time to $\frac{1}{1000}$ of a second, is also a part of this camera.

¶ The 3 A Graflex loads with regular 3 A Kodak film for photographs 3¼ x 5½.

3 A Graflex with Bausch & Lomb-Zeiss Tessar Lens, $124.00

Catalog at the Dealers or

Folmer & Schwing Co., Rochester, N. Y.

A MATERIAL AID TO SUCCESSFUL SUMMER PHOTOGRAPHY

May be obtained form these volumes of

The Practical Photographer

Landscape Work	Architectural Work
Pictorial Composition	Pictorial Printing, Part I
Floral Photography	Pictorial Printing, Part II
Animal Photography	Orthochromatic Photography
Work with the Hand-Camera	Trimming, Mounting and Framing

Each volume is illustrated with pictures by workers of world-wide repute, and as full of facts and practical ideas as an egg is full of meat.

Price, 25 cents each, or the ten books for $2.00, post-paid.
Only a few of them left

ADDRESS

PHOTO-ERA, 383 Boylston St., BOSTON, MASS.

10. A catalogue will be forwarded to each exhibitor.

Although the president, R. L. Sleeth, Jr., and the treasurer, Wm. H. Phillips, are both in Europe at present, the secretary is in a position to give prompt attention to all inquiries and communications, and those desiring further information should address,

WALDO E. STRAYER, *Secretary*,
1120 Wood St.,
Wilkinsburg, Penn., U. S. A.

WISCONSIN CAMERA CLUB

THIS club, like all camera clubs west of Ohio, is up and coming. It issues monthly notices to its members, to sister clubs and to the photographic press, announcing the character of the meetings, talks, etc., and the work planned ahead. It has a live secretary, which is the key to its success.

THE BROOKLYN ACADEMY OF PHOTOGRAPHY

THIS eminent organization held its annual exhibition of prints and lantern-slides at its rooms, 177 Montague St., Brooklyn, May 17 and 18. The affair was an unqualified success, the prints and slides attesting the well-known high standard of the society.

PORTLAND CAMERA CLUB

THE annual meeting of the Portland Camera Club, held at the rooms of the organization Monday evening, May 13, was attended by a large majority of the members, who showed much interest in the affairs of the club.

The report of the secretary contained an excellent résumé of the year's work and a summary of the advantages afforded by the club to camera workers. The membership of the club is now nearly a hundred, and is connected with the best camera clubs of the country.

The following was the result of the election: president, S. S. Skolfield; vice-president, J. R. Peterson; secretary-treasurer, O. P. T. Wish; lantern-slide director, H. A. Roberts; Executive Committee, F. H. Thompson, O. P. T. Wish, C. F. Berry, F. W. Shaw, H. A. Roberts, G. E. Fogg, W. J. Hoyt, A. P. Howard, E. E. Cheney; Membership Committee, P. H. Richardson, C. M. March and R. B. Hunt.

THE CHICAGO CAMERA CLUB

THIS formidable organization, always in the van, has shown considerable activity this spring, according to its last bi-monthly bulletin. The star feature during the month of May was a members' outing along the route taken by Father Marquette, which yielded a large number of extremely interesting negatives. In June there was a "One Man" exhibit, following one by D. H. Brookins. F. M. Tuckerman is president and Clarence E. Hale secretary.

Among other well-known workers of the club are A. W. Engel, Robert E. Weeks, Gust Horlin and John Canuteson.

PHOTOGRAPHERS' ASSOCIATION OF ILLINOIS

ALL reports agree that the ninth annual convention of the P. A. of Illinois, held at the Palmer House, Chicago, May 6 to 9, was the grandest and most successful photographic event, excepting the great conventions of the national body, recorded in the history of the State. This convention proved that State meetings gain considerably in interest when the manufacturers and dealers coöperate with the photographers.

The most noteworthy features of the event at Chicago were:

May 7. A practical talk on "Camera Operations in the Studio," by F. L. Cornell, followed by a memorable address by the well-known veteran, C. H. Wells, on "Dark-Room Work."

May 8. An eloquent address by President Stout, which was received with unbounded enthusiasm. C. J. Parrott, in an able manner, spoke on "Business and the Photographic Profession." R. H. Munn followed with an excellent, practical talk on "Retouching," in which he stated that, during the thirty-five years of his career, he had allowed no one but himself to retouch his negatives. The event *par excellence* of the day, however, was an address by "Daddy" W. S. Lively, principal of the Southern School of Photography at McMinnville, Tenn. The evening was enjoyed at the establishment of Sweet, Wallach & Co., this firm having generously provided a delightful musical entertainment.

May 9. The following awards were announced: Grand Portrait Class — silver loving cup, W. S. Lively. Class A — gold medal, W. H. Sykes; silver medal, W. L. Koehne, both of Chicago. Class B — gold medal, E. E. Godfrey, Waukegan, Ill.; silver medal, M. R. Moran, Canton, Ill. Class C — gold medal, N. S. Godfrey, Abingdon, Ill.; silver medal, R. A. Heath, Pontiac, Ill. Class L–M — silver vase, R. A. Heath; bronze vase, G. C. Blakeslee, Rock Island, Ill. Cabinet Class — gold medal, G. C. Blakeslee; silver medal, Mrs. H. M. Cole, Ottawa, Ill. Special Class (only one award) — gold medal, E. C. Pratt, Aurora, Ill. Imperial Dry-Plate Class — silver loving-cup, the Walinger Co., Chicago.

C. J. Van Deventer, president of the P. A. of A., then addressed the convention on "The History of the P. A. of Illinois." Joliet was voted as the place of the next State convention. The treasurer's report showed a credit balance of $368.92. The officers elected for the coming year are: president, Chas. E. Jay, Paris; first vice-president, H. B. Medlar, Woodstock; second vice-president, C. J. Erickson, Dixon; secretary, Geo. Stafford, Chicago; treasurer, R. H. Mann, Virginia, the cities named being, of course, in Illinois.

With stirring speeches by the newly-elected officers the convention came to a close.

WITH THE TRADE

STANDARD LENSES FOR ALMOST NOTHING

As we are frequently receiving complaints to the effect that a certain concern which at one time figured conspicuously in our advertising-pages is taking unfair advantage of persons in quest of good lenses at a low price, we take pleasure in stating—for the special benefit of workers in the State of New York—that standard lenses may be had at truly bargain prices from a firm of the highest possible standing. We mean the Anthony & Scovill Company, of Binghamton, N. Y., with a branch office in New York City at 40 East 21st St. Assured that they may obtain high-grade imported lenses at a mere fraction of the original price, all persons interested should send for a list of these bargains.

TWO LENSES OF MERIT

By virtue of its superior quality, the Bausch & Lomb-Zeiss Portrait Unar has attained a commanding position in the photographic world, and its popularity increases as it becomes more widely known. Its fine optical corrections, together with its adjustable systems for securing diffusion, make it a wonderful all-around lens suitable for busts, three-quarter and full figures, as well as for groups. Nothing better could be wished for by the photographer who wants a single lens for all his work.

Another lens of remarkable range is the Bausch & Lomb-Zeiss Convertible Protar, Series VIIa, which might well be used by photographers who do outdoor work and home-portraiture. The single lenses of this convertible series are adapted to instantaneous outdoor work under favorable light-conditions, for landscapes, groups and large heads, while the doublet is adapted to groups and architectural work.

As an example of what this lens will do in the hands of a photographer we cite the fact that it was used by W. S. Lively in making the two portraits entitled "Son of the Mountains"and "Study of an Old Man." The former won the Grand Prize in Open to World Class, April 10, 1907, of the Tri-State Association of Photographers, and the Grand Prize in Open to World Class, Chicago, May 9, 1907. The latter was hung in the Daguerre Memorial Building.

THE COPLEY PRINTS

The success of these popular platinotype prints of the masterpieces of modern painting has been remarkable. The publishers, with rare foresight and enterprise, have secured the exclusive right to reproduce the magnificent mural decorations of the Congressional Library at Washington, the Boston Public Library and many other public buildings, throughout the country, which has imparted a prestige to their productions that cannot be overestimated. This superb series of prints forms a convincing illustration of the importance of the American school of art which, for originality and beauty and freshness of ideas, makes a successful appeal to every picture-lover. The photographer, especially, will derive pleasure and profitable study from a number of Copley Prints, which are excellent and permanent in quality, also moderate in price. The latest catalogue is copiously illustrated, and forms in itself a history of American art—painting and sculpture—and is of material help to the student. The publishers—Curtis & Cameron, 94 Pierce Building, Boston, Mass.—will mail a copy for twenty-five cents, but will deduct this sum from the amount of the first purchase of Copley prints.

ROSS LENSES

From George Murphy, Inc., 57 East Ninth St., New York City, we have received a 1907 catalog of the world-renowned Ross lenses. Any one who contemplates purchasing a lens will do well to secure this booklet, for the Homocentric, Protar, Unar, Tessar, Wide Angle, Portrait and Double Anastigmat lenses of this firm cover practically all the needs of an average worker in the whole field of photography.

THE CENTURY CAMERA CO.

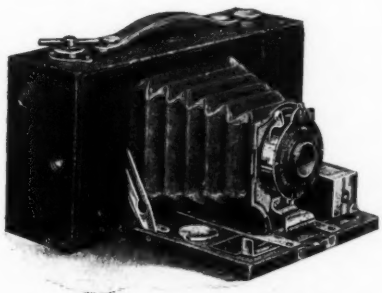
The new catalogue of this old and reliable house shows a creditable array of new cameras and kindred apparatus, the workmanship of which is of a quality never to be questioned. The striking feature this year is the Century Revolving Back, having obvious advantages. It enables the worker to view the focused picture horizontally or vertically, by simply pressing a spring-catch and revolving the back—the work of a second. A supplementary catalog is devoted to their Cirkut Camera, already a firmly-established favorite. Both of these catalogs sent free on application to the Century Camera Co., Rochester, N. Y.

A USEFUL NOVELTY

Conscientious workers, especially beginners, will derive great satisfaction from the use of Wellcome's "Photographic Exposure Record and Diary for 1907," a copy of which has come to hand. It is small, neat and compact and contains a wealth of valuable, practical hints for up-to-date workers. There are places for recording over four hundred exposures, a regular diary, a list of all standard dry-plates and films and, inside of the back cover, an excellent exposure calculator, covering every kind of subject. Price, 50 cents. Selling-agents: Burroughs, Wellcome & Co., 45 Lafayette St., New York City.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*



A FOLDING POCKET BROWNIE.

The Brownies are keeping pace with their Kodak cousins. The latest arrival, the No. 2 Folding Pocket Brownie, will slip handily into any coat pocket, as it measures but 1⅞ x 3 5/16 x 6¾ inches. It takes pictures 2¼ x 3¼ inches, has the improved pocket automatic shutter, meniscus lens of 4½ inch focus, automatic focusing lock, reversible finder, and two tripod sockets—indeed almost a Kodak—and the price is only $5.00.

Good enough for grown-ups, ideal for the youngster who has mastered the simpler Brownie cameras and deserves the encouragement this little beauty would provide.

DOUBLES.

Here is a new wrinkle, the Velox Double Post Card. It is just twice the length of the ordinary card, measuring 3½ x 11 inches. It is packed flat and after printing, is folded once so that the photograph comes on the inside. It may be fastened at the end with a gummed sticker, a metal clip or a rubber band, and sent through the mail by affixing a one-cent stamp.

These cards are splendidly adapted to use with Panoram negatives or in printing from one or more negatives. Many clever ways of telling a photographic story on these cards with different negatives will readily suggest themselves.

The Velox Double Post Card is made in Regular and Special Velvet, Special Portrait and special Rough Velox.

The price is 40 cents per dozen and your dealer can supply you.

BEFORE YOU GO.

In this summer's vacation your Kodak will play an important part.

To get the full value of its efficiency you will need to understand the principles of picture making and just how to avoid or overcome the unexpected little perplexities. There is the question of exposure, just how long or how short it should be, and just which stop to use to secure the best results.

Perchance your vacation takes you abroad to visit the stately cathedrals of England or the ancient and romantic castles of Germany—just how to best reproduce their architectural beauty will be well worth knowing.

The best way to picture moving objects, street scenes, the simplest way to secure interesting portraits of the many odd characters sure to be encountered, all this information will add much to your pleasure, both during the trip and afterward.

All this, and a great deal more valuable information will be found in the pages of "The Modern Way in Picture Making," justly called "the best book for the amateur ever written." Procure a copy from your dealer, study it well before you go—and take it with you.

It will be found worth many times the dollar it costs.

Be sure it is Eastman N. C. Look for Kodak on the spool end.

IN CORRESPONDING WITH ADVERTISERS PLEASE MENTION PHOTO-ERA

Eastman Kodak Company
ROCHESTER, N. Y., *The Kodak City.*

TRIFLES THAT COUNT.

The Kodak idea in picture making is to obtain the best possible results the simplest way.

No change is too radical for us to make if it tends towards simplification and we follow out this plan even in minor details.

Our experts use the Kodak, take it with them on outings, if they find any little annoyance there is no rest until it is done away with. Here is a little one removed :

When his knife wasn't handy (or when her knife was lost in the bottom of a Boston bag) the Kodaker has been sometimes annoyed in breaking the little gummed slip of paper that encircles the Kodak cartridge. A pull on the end of the black paper meant that the black paper instead of the gummed slip would tear—a key or a hat pin or a strong thumb nail frequently did the trick. But it meant just a little bother. That bother is over—and by the simplest wrinkle. We are now folding over a half inch at the extreme end of the black paper. It's easy to get hold of—pull, and there you are.

It's just a trifle—but we believe it pays to look after even the little conveniences.

PERMANENT.

Making Bromide enlargements is such an easy process and especially so when the same pocket Kodak that made the original negative may be utilized for making the enlargement.

Every amateur possesses a number of highly prized negatives from which he would like to make enlargements. This he may easily do and with the assurance that if the enlargements are made on Eastman's Permanent Bromide, they will be *absolutely* permanent.

A writer in *The St. Louis & Canadian Photographer*, in referring to magazine illustrations before the advent of the half tone process remarks:

" It is interesting and instructive to look through the journals (referring to the photographic) published from fifteen to twenty-five years ago, when the only illustrations were prints from the original negatives.

In one of the journals is a full length portrait of Mrs. Brown Potter, made about nineteen years ago. They are made on the first automatic printing machine by the Eastman Co., on their Bromide paper, and excepting that the whites are slightly yellow, they are as bright as when first made."

Eastman's Permanent Bromide Paper *is* permanent.

FROM THE WOODS.

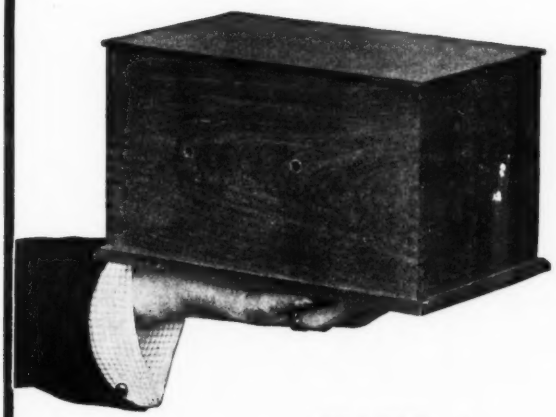
What could be more interesting to the folks in the city than an occasional post card showing just what you are doing " up in the woods," just how you look grouped around the camp fire, paddling down stream, catching that big fish or anyone of the dozen of daily incidents of vacation time.

Since tank developer days, no one thinks of waiting till the return home to develop the exposures, but sometimes printing the picture *does* seem a bit of a bother, but there's the usual easy Eastman solution of the problem.

Just slip a printing frame and a package of Eastman's Ferro-Prussiate (Blue-print) Post Cards into your kit. After printing, a little clear water does the rest—no chemicals of any sort—and bear in mind these post cards are not just the ordinary blue print, but are coated with solution that will reproduce every gradation of your negative, producing the daintiest imaginable prints.

Let the folks at home share your outing with you.

Eastman Kodak Company
ROCHESTER, N. Y., *The Kodak City.*



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Daylight
Way.

TAKE A

Kodak Tank

Developer with you

It will occupy but little space in your vacation outfit and there's solid satisfaction in knowing your exposures are *right.*

Good negatives are better than long range regrets.

"The Experience is in the Tank."

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Experience and perfect manufacturing facilities keep it there.

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